CAIRO

1001 YEARS OF
THE CITY VICTORIOUS

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Preface

Cities are, to paraphrase, all things to all men. Great symbolic cities such as Cairo, with their extended histories and current vitality, are even more likely than most to evoke diverse and conflicting responses from those who know them. To the contemporary inhabitant who lives out his daily routine along selected and repetitive pathways—to work, home, to visit friends and relations, to pray and to play—his "city" appears so mundane that he scarcely notes its all too familiar and thus invisible aspects. He envisages neither its extent and form nor its links with past and future. The tourist notes all with eager and undulled eyes, finding excitement but also bewilderment in the city's apparent formlessness and anachronistic contrasts. All modernity is dismissed by the antiquarian, who sees the modern metropolis merely as an inconvenient obstacle to a proper vantage point from which to explore this precious mosque or that priceless wall fragment. He moves selectively from one to the other, ignoring the contemporary form of the city in his effort to reconstruct an earlier life, still temptingly visible at times.

To the student of modern urbanism, however, Cairo presents primarily problems and an enormous challenge. Here admittedly is a city with prehisting problems of land use chaos and efficiencies, of human and vehicular congestion, of social disorder and poverty, striving vigorously to create a utopia. But here also is a complex city, a blend of old and new, of East and West, which must not be allowed to achieve its new order at the expense of its unique and poignant beauty nor its human warmth. The problem is one of balancing conservation and progress.

The challenge, on the other hand, is one of discovery. Can a pattern, a form, a rationale be extracted from what appears to be the casual disorder? For order there must be. Perhaps no creation of man is capable of retaining its underlying organization so obdurately in the face of dramatic shifts in culture and technology as the urban shell-home he has built over history. If order is to be found, however, more than the naked eye must be employed to uncover its hidden framework. Both the telescopic lens of history and the infrared lens of statistics are needed to separate the accidental from the essential and to trace the often devious chains that bind present with past and that link parts with the whole. If this book has an implicit goal, it is to uncover the orderly patterns and temporal sequences in Cairo's growth and development that have yielded the present form of the city and have given rise to its particular qualities.

There has been an ancillary objective as well. While every city constitutes a unique Gestalt, it also shares with others of its genre certain basic similarities. While explicit comparisons are eschewed in this book, it is nevertheless clear that Cairo was, to some extent, merely one example of genus "preindustrial city," species "Islamic." As such, an analysis of her experience can throw light on other communities whose growth and development have been conditioned by similar technological and cultural determinants. Furthermore, the modern bifurcation of Cairo into indigenous and "Westernized" quarters parallels the experience of many cities with a colonial heritage.

The problems the city now faces in eliminating these divisions and building a unified physical form which reflects her recently regained cultural unity are problems being faced in other modernizing nations as well.

How shall a study of Cairo—a city of such venerable antiquity—cope with the question of historical data? How much should be included; what can be left out or glossed over; how shall the evidence be interpreted? There is no easy nor universally satisfactory solution. As a sociologist I make two assumptions: that historical writing, like every other kind, is always selective and, in ways, personal; second, that one's view of history is deeply affected by one's vantage point. The general historian, standing above the incredibly complex and sweeping movements encompassed within the more than one thousand years of Cairo's life, may be annoyed to find emphasis given to certain periods relatively insignificant on the larger canvas, or certain institutional arrangements and patterns treated to the exclusion of others of at least equal import to the larger society. My defense is to plead unashamed myopia. Viewing history not from the heights but from the narrow streets of Cairo yields a peculiarly distorted image. Throughout, my criterion has been to measure each period and development by its impact upon Cairo and its relevance in explaining the conditions and counterimpulses at work in the contemporary city (although some parts of the history are intrinsically so fascinating that I could not resist them). In this I have operated more in the manner of biographer than of historian, for the ultimate goal has been to understand the city, viewing the formative milieu selectively and in terms of its relation to the object of study.

This book, to which I owe so much of my education, has had a varied and overlong history. I began work on it in 1957 while associated with the Social Research Center of the American University at Cairo, and it is to the Director of the Center, Dr. Laila S. Hamamy, that I must express my deepest appreciation, not only for her tangible contributions in making available financial support and assisting personnel but also for the faith she
PREFAE
demonstrated by granting me a free hand to explore the
subject and to shift the focus of the study. The project
began originally as a statistical analysis of Cairo by census
tacts. The results of that inquiry have already been
published by the Social Research Center in 1963, under
the title Cairo Fact Book. It became evident, however,
that the ecology of the modern city laid bare by that
analysis was static and still confused. Further statistical
analysis was to clarify the picture, but the reasons for the
ecological pattern could be grasped only within the
longer perspective of the city's evolution. Thus, toward
the end of my sojourn in Egypt I began the research and
writing of this book, a project that in one form or
other has taken a decade.

In this endeavor I have benefited from the generous
support and encouragement of many. To the Radcliffe
Institute for Independent Study I owe the time during
which most of this manuscript was committed to paper.
An appointment as Associate Scholar during 1953-1954
allowed me to devote more time to writing and gave me
access to Harvard University's excellent library. The
rather complex statistical operations required for the
final portion of the book were made possible by a grant
from the Milton Fund of Harvard and by the liberal
amount of computer time granted jointly by Smith
College and the University of Massachusetts. Additional
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available by the M.L.T.-Harvard Joint Center for Urban
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special debt of gratitude, for he gave me my earliest train-
ing as an urbanist, was a stimulating guide and colleague
for many years after that, and demonstrated his continued
confidence in me by co-sponsoring this book with the Radcliffe
Institute. Various other staff members of the Joint Center
gave generously of their time and competence. Mrs.
Johanne Khun, in particular, rendered significant and
intelligent editorial services as the typical editor of the
manuscript.

Intellectual acknowledgments are sometimes more
difficult to identify than practical ones, for they tend to
become so deeply incorporated that we lose sight of
their origins. This is not the case here. This book liter-
ally would never have been conceived, much less brought
to fruition, without my husband, Ibrahim Abu-Lughod.
Not only did he take me to Cairo, an irresistible stimulus
to an urbanophile, but he generously gave of his vast
scholarly store. He guided me to and through the original
Arabic sources, translating, tracing usages and tradi-
tions, evaluating conflicting evidence. No less important
were his contributions to my psychic stamina. A wise
criticism or an optimistic encouragement at those recur-
rent moments of author's cramp are gifts for which no
adequate recognition can ever be given.

I have not been the first to be charmed into bondage
by the city of Cairo; she has captivated many before,
and to these earlier writers each new student of the city
must defer, recognizing that his endeavor has been
built upon foundations laid by others. If and to the
extent that my effort improves upon theirs, it is only be-
cause I have had the advantage of "standing on their
shoulders," freed by their prior syntheses to pursue ad-
ditional goals. While the number of books on Cairo in
legion, two in particular have represented the culmina-
tion of their generations' knowledge of the city and
have made these findings available to the western reader.
The first was a small classic, The Story of Cairo (1903),
written by Stanley Lane-Poole, nephew of childless Ed-
ward Lane and heir to his mantle as one of the first
British scholars to study seriously the language, literature,
and culture of Islamic Egypt. If my book does not dupli-
cate his intriguing narrative, it is only because my
ultimate orientation has been social and contemporary
rather than historical and architectural. The revisions
required by later knowledge have been amply supplied by
the architectural histories of Sir K.A.C. Creswell, in
whose debt we all remain. The second book, prepared
one generation later and far broader in scope and tem-
poral coverage, was the two-volume work by Marcel
Clerget, Le Caire; Études de géographie urbaine et d'hist-
27341430, 6/18/2019 7:12:33 AM,
acte économique, published in Cairo in 1934 and
now, unfortunately, out of print and difficult to find.
Since its publication it has served as the standard West-
ern-language source for information on Cairo and, in
orientation and focus, approximates the present work
more closely than does Lane-Poole's. If I appear in the
course of this study to dwell with Clerget on points of
fact or interpretation it is only because his comprehensive
work has alerted me to many of the unresolved issues in
Cairo's growth and development; I can only hope that
my own synthesis will prove equally stimulating to the
next reappraiser. Furthermore, Clerget's analysis ter-
minalized with the Egyptian Census of 1927; when Cairo
had only little more than a million inhabitants and
covered only a fraction of its present developed area. The
city's population now exceeds 5 millions, suggesting that
a crucial phase still remained unexplored. From this newly
Gained hindsight I cannot help but reinterpret some of
the past factors responsible for the contemporary city's
organization. Not only has the city grown but our
knowledge of societal organization during its earlier
periods has similarly expanded. I have tried to incorporate
these revised views of Islamic urban organization into
the interpretation wherever they seem relevant, while
recognizing that they still fall short of adequacy and
may be significantly changed in the future.

Not only paper-and-ink friends but also more lively
co-workers have aided me in fashioning Cairo. Numerous
colleagues at the American University at Cairo con-
tributed to initiating me into the intricacies of the city.
The late Professor Alphonse Said, who generously shared
his intimate knowledge of the city with me, and Ezra
al-Din Attiya, who acted as my enthusiastic research
assistant for almost two years, must be singled out
especially, although there were many other Cairoites
who assisted without knowing. From among the govern-
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Culture made it possible for 'Abd al-Fattah 'Id to con-
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Ahmad Bulsh al-Din, chief editor of Al-Musawwar,
that made inclusion of older photographs of Cairo, drawn
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Others have been equally generous in reading parts of
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who have considered and commented on the manuscript
itself or upon the statistical techniques utilized for the
final section are Geidone Sjoberg, Hilda Golden, Thomas
Wilkinson, and Peter Park. To all these I express my
grateful appreciation.

This volume was no simple matter to produce. The
accuracy of its expression and the beauty of its presenta-
tion owe a substantial debt to two members of the
Princeton University Press. Manuscript editing was done
meticulously, graciously, and with interest well beyond
the call of duty by Eve Hanle, and the handsome design
was created by Helen Van Zandt whose taste and judg-
ment are revealed on every page. Their contributions
should be a source of pride to them as they are pleasure
to me. The assistance of the Program of African Studies
of Northwestern University made possible the inclusion
of maps and illustrations, and the edition and judg-
ment of Barbara Kalkas transformed the index into a
true guide.

Perhaps my final acknowledgment must be to the city
of Cairo itself. Had I not been so fascinating the
impetus for this book could never have been sustained.

JANET L. AMI-LEGHOD
Wilmette, Illinois
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Introduction

In the year A.D. 969 the lines of a small rectangular military capital were staked out by a Fatimid conquering army from North Africa. Set near an existing town founded more than three centuries earlier by another military conqueror imbued with similar religious fervor, the new bastide was named al-Manṣūriyyah, from the Arabic root signifying God-granted victory. Within a few years the name—but not its meaning—had been changed to al-Qīhirah (The Victorious), to celebrate the triumphal entry of the Fatimid Caliph into a city which was to serve as the seat of his Shi‘ite dynasty for the ensuing 200 years and which was to persist to the present as one of the great cities of Islam.

The blend of religion and the military, characteristic of its origin, was to impart unique elements to the city’s development; the meaning of its name was to augur accurately for the future. Despite wide oscillations in the fate and vigor of Cairo (the Western corruption of al-Qīhirah), she not only survived but developed into the present metropolis—home to more than 6 million Cairenes, symbol and center for more than one hundred million Arabs.

The colossus of Cairo today dominates the two continents Egypt bridges. Even as Africa and Asia Minor find their cultural and geographic nexus in the heartland of Egypt, so also do both continents turn inevitably toward its core, Cairo. One must go as far north as Berlin to find a competitor in size, as far east as Bombay and as far west as the Americas to find its equal, and one may travel to the southern Pole without ever meeting its peer. Within Egypt, the city’s dominance is even more striking. One out of every seven Egyptians resides within its official boundaries; one in six lives in its metropolital web.

And, just as Egypt herself stands astride two continents, so Cairo stands astride Egypt, linking as well as dominating the two subregions—Upper Egypt to her south and Lower Egypt to her north. Her dominance is challenged only by the Nile, the river that bisects both Cairo and the nation but paradoxically unifies as it divides.

The geographic site of the city is strategic. Historically, the flow of things, peoples, and ideas in the Nile’s narrow valley has always funneled eventually into the north-south, south-north axis. South to north is the natural flow of the country. Ancient and contemporary Egyptians alike describe south as “up” and north as “down,” and by no capricious reasoning. South is the source of the river, the source of the very soil, and the power of the river’s flow has dragged the country with it. It has even dragged Cairo herself downstream, as will be seen later.

Viewed from the south, Cairo is a prism through which the single stream of the Nile is refracted into the myriad channels which vein the Delta. Only ten miles north of Cairo is the barrage that regulates water flow into the two branches of the lower Nile, one leading to Damieta, the other to Rosetta (Rashid). Thus, Cairo guards the gateway to the wide Delta and controls its destiny.

North, on the other hand, has been the soft underbelly which attackers, coming one after the other in dizzying succession, have invaded from three directions to reap the fruits of the black soil and the browned people. Here Egypt is virtually defenseless. Nowhere in the diffuse Delta can an enemy be repelled in force. But just as all streams lead out from Cairo, so all roads from the north converge inevitably upon her, and through her narrow bounds must pass any force intent on controlling the
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eastern bank of the river (the site of present Cairo), indicating similarly that this area contained early settlements of importance. Among these were the shrines of Oa, or Helopolis, which now lie within the northeastern extension of the contemporary city, and the religious settlement at the river which guarded its approach, Khedive, later called Babylon, which is now incorporated into the southern limits of the modern city.

In later times, when Egypt had become merely a Mediterranean colony of the Greeks, the seaport of Alexandria usurped the title of primate city from Memphis and Thebes. Despite this loss in status, the strategic

2. Lane in walled Babylon today

headwaters and hens the country. So it is that invaders have traditionally moved on to establish military headquarters at strategic Cairo.

The first known settlement in the vicinity of modern Cairo was also one of the earliest urban settlements in the world, the ancient capital of Memphis. The ruins of that city lie a dozen miles south of contemporary Cairo on the opposite (i.e., western) bank of the river. Memphis flourished between perhaps 3000 and 2500 B.C., reaching its zenith during the thirteenth century before Christ when the Southern Kingdom extended its hegemony over the Delta and unified the two regions. This unity made centrally located Memphis a logical seat for a capital for the very same reason that Cairo now serves as one.1 Pharaonic remains have also been found on the

1 John H. Breasted, A History of Egypt (Charles Scribner's Sons, New York: 1913, 1956 imprint), pp. 5, 111. Marcel Chérif, in his Le Caire, Étude de géographie urbaine et d'histoire

position of Memphis assured continuity of settlement on the site. Thus, when the Greek geographer Strabo visited Egypt in 24 B.C., a few years after the Romans had conquered it, he found Memphis a thriving city, large and populous, ranking second only to Alexandria.2 At Helopoli he found only the ghost of a shrine city,3 but, in the meantime, the settlement at Babylon had become more populous, since one of the three Roman legions guarding Egypt was encamped there on the defensible highlands overlooking the approaches to it and to Memphis across the river.4 Had Strabo returned about a century later, he would also have observed the reopening of an ancient canal linking the Nile with the Red Sea and some new heavy fortifications on the site (later named by the Arabs and currently known as the Qar al-Sham)5 contributed by Trajan6 or even by Trajan himself.7 A Greek manuscript of 8

3. Fortress of Trajan in Babylon
4. Fortress now far below ground level

temporarily of these developments was Ptolemy who, writing in the second century after the Roman conquest, described Babylon as a town surrounding the Roman fortress, through which passed the canal to the Red Sea. From his description, one gains the impression that there existed a fairly extensive settlement in Babylon at that time.8

Developments during the next few centuries are surprisingly shrouded from view. Following adoption of

7 According to the Master Plan of Cairo (Government Printing Office, Cairo, 1956), p. 2, the testimony of Ptolemy can be used to substantiate the view that the Canal of Trajan drained the city of Babylon, which would have made the latter an extremely large settlement indeed. However, a closer reading of the geographer’s statement reveals that he merely noted that the canal flowed through the city; presumably it could have passed near its northeastern limit.
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Christianity as the official religion of the Roman Empire came to the most converted forms in Egypt's heterogeneous popula-
tion. Babylon became the religious seat for a Bizantine pop-
ulation, which preserved its faith and culture despite the
invasions. For centuries, the city was a center of learning and
commerce, attracting scholars and traders from around the
Empire. In the late 4th century AD, the see of Babylon was
raised to the rank of metropolis, giving it even greater
importance.

The city of Babylon was one of the most important centers of
Christianity in the Eastern Church. It was the seat of the
Archbishop of Babylon, who was a member of the Holy Synod
of Antioch. The see of Babylon was also one of the few
Churches that continued to exist in Persia after the
Muslim conquest.

Gardens and monasteries were scattered on the plains
between the fortress and the sea, and the mountains to the
north and between the fortress and the mountains to the
cast. The garden of Babylon was famous for its beautiful
nurseries, where all sorts of flowers and trees were grown.

The fortress of Babylon was built in the 7th century BC by
Nabopolassar, the founder of the Babylonian Empire. It was
renamed by the Persians as Babylonia, and later by the
Greeks as Babylon. The city was renowned for its
architecture and its immense wealth.

The city was destroyed by the Persians in 331 BC, who
burned it to the ground. After the death of Alexander the
Great, the city was rebuilt and became the capital of the
Seleucid Empire. It was later conquered by the Parthians
and the Romans, and finally by the Arab armies in the 7th
century AD.

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...
PART I. THE ISLAMIC CITY
The Legacy of the First Arab Settlements

During the seven months that the Arab invaders under 'Amr besieged the Byzantine fortresses at Babylon, they pitched their tents on the high, dusty plain above riverine Babylon. Once capitulation was achieved, the troops were arranged somewhat more formally. Northeast of the fortress (renamed Qasr al-Sham) by the Arabs) at the firm bank of the Nile, 'Amr erected the first mosque in Africa. With the mosque at its core, flanked by the commercial markets which usually accompanied the central mosque in Islamic cities, a quasi-permanent army camp was established. It formed an elongated semicircle stretching as far north as the mouth of the Red Sea Canal and as far south as the inland lake, the Birkat al-Habash. This was hardly a unique Arab settlement. Indeed, throughout the conquered territories, Arabs set up similar encampments, to which they gave the name Fustat (from the Latin Fustatum, or the Byzantine Greek φοστάτον, meaning simply encroachment). Always located at the edge of the desert, each had a similar plan of widely scattered nuclei. The raison d'être of this physical design can only be understood in terms of the social characteristics of the founders. The Arab army consisted of diverse and often incomming tribes and ethnic groups, was accompanied by a straggling retinue of women, children, and slaves, and was composed of men whose past nomadic life made close quarters repelent. Such an army was not likely to set up a permanent city of the Hellenic or Roman basilica type. The city of Fustat, established by 'Amr around the Babylon fortress, was originally as

1 A. R. Guest has done a remarkable job of scholarship in reconstructing this early settlement. See his "The Foundation of Fustat and the Shifting of that Town," Journal of the Royal Asiatic Society (January 1927), pp. 4, 48. The article includes a valuable map, which has been reproduced in Ibn Badr, "Clair," Encyclopedia of Islam (1932). Guest points to the basic similarities among Fustat, Basrah, and Kufah, each "a long struggling colony of men leaning and harking", arranged irregularly in groups of loose order. p. 82. Each was also a mecca.

2 See K.A.C. Creswell, Early Muslim Architecture (The Clarendon Press, Oxford, 1953), 1, 29, particularly note 7 on etymology. This derivation is also noted by Philip K. Hitti, History of the Arabs (The Macmillan Company, New York: 5th edn., 1937), p. 175, note 23; and by Xavier de Planhol, The World of Islam (Cornell University Press, Ithaca: 1955), p. 3. Historians of Cairo, such as Lane-Poole and Marcel Clerget, have translated Fustat as "mecca", without recognizing the military implications of the term. In this they have undoubtedly followed Masudi's interpretation, as explained in Kölim (Bühler Press, Cairo: 1851), 2, 282.

3 But, as we have seen, Fustat and the Cherit have applied it to any army encampment. While eventually the name replaced Babylon Clerget has aptly described it, "a centre mi-sédentaire, mi-nomades, grand campement à proximité du désert... Une sorte de ville en formation." At first, segregation was rigid, with each ethnic group or tribe assigned its own isolated quarter. However, during the sixty years following the conquest, as the temporary camp was transformed into a permanent commercial as well as military settlement, there was both a retransmission toward the central nucleus at the Mosque of 'Amr and its radiating markets, and a filling-in of the spaces purposely left open by the original plan. The ultimate result was a fairly compact town of a permanent nature, having little relation except in name to the army camp which had been its progenitor. An economic depression has also contributed to the physical retransmission but, with the restoration of prosperity in the eighth century, Fustat embarked on a new expansion in all directions eastward to the higher land, westward to the new land left by an even-then receding Nile, southwest to the banks of Birkat al-Habash-from the period of retransmission but newly rebelled—and, less markedly, northward to the vicinity of the more and more neglected canal. By mid-century, the time of its first major dynastic shift marked by the 'Abbasid victory over the Umayyads, Fustat was a provincial capital or 'Ayrīn, the distinction was retained in the purgery until the end of the seventh century. Beier suggests that the early distinction was probably more administrative than geographic. The name "Babylon" fell out of use among the Arabs soon afterward, but was retained throughout the Middle Ages by the Copts who sometimes used it with reference to all the settlements stretching between the fortresses and Heliopolis. The term "Babylon" was also used in Latin manuscripts, in trade agreements with Europe, and in European literature by, among others, Mandeville and Purchas. See Becker, "Babylon," in the new Encyclopedia of Islam (Leiden: London, 1935), 1, 842-43. European travel documents throughout the Middle Ages continue to refer to Babylon which, after the establishment of al-Qahirah in the late tenth century, was used as the ordinary term for Mısır al-Qal'lahis, I.e., Old Fustat. Some of these usages are supported by documents translated and incorporated into an article by P. Herrmann Dopp, "Le Caire: Vu par les voyageurs occidentaux du Moyen Âge," Bulletin de la Société d'Études d'Égypte (Iss. 32, 1902), 117-149, which deals with travelers to Cairo before the fifteenth century. In a fifteenth-century manuscript by a Venetian trader, a similar distinction is made between Babylon and Cairo. See P. Herrmann Dopp, ed., L'Égypte au commencement du quinzième siècle depuis le traité d'Emmanuel Pâlot de Crete (Munich 1910) (Paris 1st University, Cairo 1920), pp. 1, 26, 31, 38, for examples of this usage.
A prototype of a protected walled town, al-A’qab was planned as a permanent settlement whose core area was the Citadel, a concentric ring of defensive walls with towers and gates. Surrounding this typical nucleus were the Iranian-style palaces, administrative buildings, residences of members of the court and the various religious, commercial, and social institutions. The walled town, with its strong defensive system, provided a degree of autonomy and self-containment for the community, allowing it to withstand attacks and maintain its independence. 

Fugan and al-A’qab were built on an attenuated plateau, with the flat plain and the desert to the east and the south. During the era, the region experienced a shift in the balance of power from the Abbasids to the mighty Fatimid caliphate. This change in the political landscape led to new challenges for the Fatimid rulers in the region. 

The Fatimid caliphate emerged as a significant power in the late 10th century, challenging the Abbasids for supremacy in the region. The new rulers at al-A’qab, recognizing the new geopolitical landscape, began to consolidate their power and established a strong presence in the region. The Fatimid period marked a significant cultural and architectural shift, as the city underwent a transformation that reflected the new political and social realities. 

The city of al-A’qab was a center of trade and commerce, with connections to the broader Islamic world. Merchants from across the region sought to establish trade routes through the city, benefiting from its strategic location. The city also played a role in the spread of Islamic culture and ideas, serving as a hub for religious learning and scholarship. The Fatimid period saw a flourishing of the arts, with the city becoming a center for the production of manuscripts, textiles, and other crafts. 

The city was also a political and military fortress, with its strong defensive walls and towers serving to protect the inhabitants from external threats. The Fatimid period saw a number of military campaigns directed against the city, but the strong defensive structures allowed the city to withstand these attacks and maintain its independence. 

The legacy of al-A’qab can be seen in the city today, with remnants of the earlier periods still visible in the city’s layout and architecture. The city served as a model for the construction of later Islamic cities, with its strong defensive walls and central nucleus serving as a template for future urban development. The city’s role as a center of trade, commerce, and culture has endured, and it continues to be an important center in the region today.
The four successors of Ibn Tulun further embellished the family crown jewel of al-Qahirah but, during the brief reign of the last successor, Ibn Tulun's son Shayban, the splinter state founded only a third of a century earlier reverted to 'Abbasid control. To avenge the indignity which the Tulunid's abortive independence had inflicted, 'Abbasid troops destroyed al-Qahirah in 955. Only that vast square courtyard surrounded by gracefully arched porticoes—the Mosque of Ibn Tulun—still survives to mark the site of the dead city. Once again, the 'Abbasids resumed their rule from the Dior al-Imaraha in al-Asar', which by this time had so merged with Fustat that even the name had been dropped, the entire city again being identified simply as Fustat.

At the same time the 'Abbasids were reasserting their hold over Egypt and her principal city, Fustat, the movement that was destined eventually to overthrow them in that region and to establish Cairo not merely as the largest city in Egypt but as one of the great cities of Islam had already begun. By 909–910 in Tunisia, Soqut ibn Husayn (Ubayyibn al-Mahdi) had established the Shite Fatimid Caliphate that was to reach its fullest expression on Egyptian soil. Abortive attempts were made in 914 and again in 921 to press eastward to Egypt, but it was not until 969 that the movement gathered enough momentum to permit the conquest of Egypt. By then, the Khuluis were in power at Fustat which had become a bustling commercial metropolis.4

4. Maqrizi, Khutbat, 1, 286. It may have been at this time that the term 'Muri' began to be applied to the settlement of Fustat together with its offshore island of Rawdah. Although Clerget suggests that this usage dates from the time of Ibn Tulun (Le Caire, 1, 119), we have no evidence that the term 'Muri' was used as a substitute for Fustat before the end of the ninth century, and its usual application to Fustat may date even earlier. My argument rests on the following evidence. In 894, Yaqut wrote his Book of the Countries, a detailed geographic account of the regions of the Arab deserts. He notes that "the districts of Egypt bear the name of their chief towns" and that one of the chief towns of Fustat sometimes called Babylon . . . [which is also known by the name of Kurt." This translation is from Gassen Witt, Livre de les pays (Cairo: 1937), pp. 184, 175. If Fustat had also been called Muri at that time, presumably Yaqut would have included this among the alternate names provided. However, in another work by the same author, his Tarikh, the term "Muri" appears in frequent contexts to mean the metropolitan area of Fustat, rather than the country. See, for example, Yaqut, Histories, ed. T. Housman (Leiden, 1853), iv, 404, 560, 565, 623. We have already seen that a contemporary of Yaqut, al-Baladurri, writing in the late ninth century, equated 'Alqiy with Fustat but used the term "Muri" to refer to the larger region. See his Fustat al-Baladurri (Cairo, 1902). This also tends to be the usage employed by a somewhat later writer, Marriti, who described the Egypt he knew during his visit in 969. In Marriti's epic work, Les provinces d'or (Arabic text edited and translated into French by C. Barbot de Meynard and Pavot de Courvalle, published by the Société Asiatique, Imprimerie Nationale, Paris: 1861–1971), "Muri" is occasionally used as a possible substitute for the Fustat region. In this work the confusion between Muri as the name of a country and Muri as the name of a district or city, which plagued even contemporary usage, remains compounded. In most contexts, when Marriti uses the term "Muri," he refers to the country of Egypt (see for example in 1, 366, 365, 366, 375, where Fustat as a city is used in contradistinction to the country of Muri). However, there are at least three contexts in which the term "Muri" seems to refer to a city which included both Fustat and the island of Rawdah (Jafrat al-Sir?ah). For example, in 11, 364–365, he describes the festivities on the night of the gahran, using alternately the terms "Fustat" and "Jafrat al-Sir?ah," and "Muri," and observing that "the gates of the verdun are closed during that night. Gates were found only in cities. This, however, is far from conclusive proof that Muri was the common term for Fustat. Another context appears in 1, 466, where the name Muri is coupled with other towns, Homs, Mare, and Astat, as an equal. A third use of Muri as a city rather than a district or a country is found in 11, 291–292, where he says "Marriti led his Byzantine soldiers from Syria to Muri which he besieged and around which he dug trenches in the area adjacent to the cemetery; over them was Baw Ziyar ibn 'Abd Allah, and the leader and the master of Fustat was Abu Bakr al-Salabah." (Translated from the Arabic version.) Presumably only a city can be besieged. The conclusion from the above is that, as early as Yaqut and certainly by the time of Marriti, the term "Muri" was in occasional use for the area of Fustat; its application, however, was still fragmentary and without uniform meaning. Less than half a century after Marriti, the term "Muri" was a complete substitute for Fustat, and is used by all later writers describing the community, as will be seen below. Between the time of Marriti (whose use of Muri is fragmentary) and 365, when al-Muqaddasi wrote his Asas al-Tabaqat fi Marfat al-Mamluk, which included a geographic description of Egypt and its cities, the term "Muri" had evolved into a popular substitute for the term "Fustat," which evidently was falling out of use although still mentioned. It is in this work that a specific identity between the two terms appears. Note the following quotations translated from the Arabic text edited by de Carle (E. J. Brill, Leiden: and edn., 1961–1970). "The Muri region [i.e., Egypt] is divided into seven provinces, 4 of which are inhabited and have extensive development [cities] and a beautiful countryside (p. 194). . . . [among the provinces lies] Maqshina, whose central town [Baw Baw] is Fustat which is al-Muri, and whose cities include al-Aziziyah [Memphis], al-Faysh and 'Ain Besht [Heliopolis] (p. 194). Elsewhere he says: "Al-Mauri is a city according to every authority because it includes the central ministries and the Amr al-Ma'mun [the Caliph]. . . . the region flourished and its name became famous and extended and therefore it had become Mauri, which was known as Baghda, the pride of Islam, the market of mankind" (p. 157). It would not be unreasonable to connect this new usage with the founding in 969 of the newest of the new cities of Qahirah which had to be distinguished from the true metropolis, Fustat—hence the term "Muri." The position I have taken here is in contradiction to that subscribed to by, among others, A. J. Wensinck, in his article "Muri," Encyclopedia of Islam (1973), ii, Wensinck claims that "the period between the Arab conquest and the foundation of Cairo the name Muri is regularly applied to the city just mentioned [southwest of later Cairo]. . . . After the conquest of Egypt by the Muslims there were two settlements only on the right bank of the Nile . . . viz. Babylon and Fustat. The papyri
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of the Fāṭimid dynasty was its fourth Caliph, Mu‘izz al-Dīn, who had selected to lead his forces for the Egyptian campaign a brilliant general and administrator, one Jawhar by name.18

The discontent of Fustī’s population with the arbitrary rule of the Ikhshīdīs was so great that, even before it had been handed over to the emirs at Cairo by a treaty dated 7 Rabi’ al-Thani in July of 959, the populace stood idly curious as to how the new rulers crossed the river without difficulty and established their control over the capital. Leading his triumphant army, Jawhar sought open land on which to quarter his troops. According to at least one account, he carried with him precise plans for the construction of a new princely city which Mu‘izz envisaged as the seat of his Mediterranean empire and as a fitting rival to Baghdad.19 Mu‘izz entrusted to his general the selection of its site in the vicinity of Fustī’s.

never mention Mīr as the name of either of these settlements. Yet in the latter part of the seventh century A.D., the application of the name Mīr to one or the other or both must have existed, as is attested by John of Nīkāī (737-802),bold face (lines 12)—As demonstrated above, the application of the term “Mīr” to pre-Qādirī settlements was not regular at all. Only the document of John of Nīkāī, however, can be cited in evidence of this position; and I have already discussed the dubious reliability of this document (Chapter 3, note 13).

18 A brief account of the history and its designs on Egypt may be found in Carl Behrens’s History of the Islamic Egypt, 2nd ed. (Santa Barbara, 1959), pp. 154-326. The origins and identity of Jawhar are discussed in detail in this study. While it is generally believed that he was a converted Christian slave from either Greece or Sicily (his name is Jawhar, the Skilled), the most common point of contention is that he was of Skolk origin, the freed son of a converted slave. This recent research has been incorporated in H. Monsef, “Jawhar,” Encyclopedia of Islam, 1 (1965), pp. 93-104.

19 Clerget, Le Caire, 1, 138. Is Clerget’s contention that Mu‘izz himself had designed the proposed city. While it is impossible either to verify or confirm this, the plan—the city was reconstructed by Rasmieh (reproduced as Figure 28 opposite p. 169 in Volume 1 of Clerget, and is a Closeup, Cairo, Egypt: This is not a natural translation of original text. The text is a standard text, with all of the comments and notes of the translator.

His usual story associated with the change in Cairo’s name is a mythological one: a bird, known today as the Alexandrian egret, had claimed the string which the emirs had used to signal the construction of the city of al-Māʾār, including al-Masāʾa. However, C.A. Crowl, in his The Muslim Architecture of Egypt: (Revised and enlarged), pp. 633-717 (The Cleopatra Press, Oxford, 1995), has raised a legitimate objection to the authenticity of this account by pointing out that “in almost identical story is related in the form that it had evolved by the thirteenth century: the building of the Mamluk by Alexander the Great. Thus the story that is told by Māʾār seems to have been in circulation twenty-six years before the establishment of Cairo” (p. 252).

20 Clerget (Le Caire, 1, 138) and other scholars have raised the question of whether the building of Fustī’s city was intended at all: there is no evidence outside the will of the king, the district of which was transposed from the eastern district of Cairo to the western. Therefore, the array was placed on the southern portion of the palaces, while the new city was located to its north.

21 At this time the common people of Fustī could enter the royal enclosure only by special permit. Note the parallel between this and the later case of the royal city of Fustī, Fustī, which had a similar relationship with the fourteenth century Fustī, Fustī, as reported by Roger Le Tourneau, In the Eye of the Precursor, trans. by H. Clement (University Press of Virginia, 1965), pp. 12-58.

21 Al-Maqṣūdī, Taʾlīl al-Fustīḥ (of Gooce and others), pp. 117-118. The English translation included in the Arabic to the Ancient City of Egypt, 2nd ed. (Cairo University Press, 1937), the relevant portions appear on pp. 316-342.

22 The只想 study of the city of Fustī is quite limited, and is based on the work of the Arab scholar, Fustī, which was a substantial contribution to the study of the city of Fustī. However, it is important to note that the city of Fustī was not the only city of its kind in the vicinity of Fustī, since a number of other cities were also being constructed at this time. The city of Fustī, however, was the largest and most important of these, and it is the one that is referred to in Arabic as al-Maqṣūdī in the Arabic language.

23 Fustī, al-Maqṣūdī, Yaqūt, and al-Maqṣūdī (in Arabic translation) p. 59. There is another hint concerning the application of the term Mīr” which appears in the work of Fustī’s contemporary, John of Nīkāī (737-802), who wrote in his history of Egypt that the city of Fustī was the site of the residence of Fustī’s father, who had died in Fustī. This has been interpreted as referring to the central city of Fustī, which was the residence of Fustī’s father.

24 The attention more even than the two competitors. Al-Qādirī described as a fortified city (from which the name Qādirī is derived). The walls of Fustī had deteriorated by the middle of the eleventh century; with buildings of five and six stories, each a veritable fortress. The city was divided into ten districts (wardy or quarters), all on the same side of the river. The city of Fustī, which began at Mīr. Less than a mile south of Al-Qādirī was the city of (Fustī) Mīr, built on a hill. The northern limit of Mīr was the Mosque of Ibn Tūlūn. The city of Mīr is described in al-Maqṣūdī’s Kitāb al-Fustī, which he wrote in 1054, where he concurs with al-Maqṣūdī in locating the center of the city at the Mosqu of ‘Arab by which, at that time, it was surrounded on all four sides by exceedingly prosperous markets.

During the eleventh century, then, we reconstruct an image of two symbiotic cities: Mīr-Fustī, the larger of the two, occupied by the indigenous population and devoted to commercial and industrial activities; and al-Qādirī, a well-designed community for the needs of a large and complex curiocity society, divided into separate quarters according to ethnic lines and liberally endowed with gardens and palatial residences. The two communities were served by dual religious quarters at Mīr devoted to commercial ventures, and a newer one at al-Maqṣūdī (the revival of the pre-Qādirī city of Tundriyān) where the military fleet of the Fāṭimid was anchored. The picturesque landscape depicted by the travelers was to vanish without


While some have questioned the veracity of this report, it remains the only account from the recent archeological excavations at the site of Fustī. In his “ Preliminary Report: Excavations at Fustī,” George Scullard suggests that the capacity and elaborate design of the (probably) tenth-century sewerage system uncovered by the expedition would have been adequate to accommodate an extremely dense settlement of fairly high density. While the excavation has been far from complete, the Journal of the American Research Center in Egypt, iv (1965), 729-731 plus places. See especially p. 17.

Sekir Naim (Arabic translation); p. 59. There is another hint concerning the application of the term Mīr” which appears in the work of Fustī’s contemporary, John of Nīkāī (737-802), who wrote in his history of Egypt that the city of Fustī was the site of the residence of Fustī’s father, who had died in Fustī. This has been interpreted as referring to the central city of Fustī, which was the residence of Fustī’s father.

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Political events, in which Fushtāt was an innocent but perhaps inevitable victim.

It will be recalled that the area of al-Qāhirah had never fully recovered from its destruction in 909. The buildings standing had been usurped by squatters who lived among the rubble. By the end of the tenth century it and also the sparsely settled hamlets of al-Askar had become sites from which building materials were scavenged. The district had become so desolate that a wall was built during the eleventh century to hide these uglinesses...

As the population of Fustat was further decimated by the series of catastrophes which befell it at the end of the tenth century, the abandoned areas grew larger. The reduced population huddled closer to the center near the Mosque of Amr or was drawn toward the port area which had been displaced westward by the receding river channel. Political power had long since shifted to the new city of al-Qāhirah, and gradually economic power began to move there as well, with the luxury markets transferred to the pristinely city and the Caliph controlling more and more of Fustat’s real estate.

Thus, a decline in Fustat’s fortunes had already begun from within by the time the Franks launched their first crusade at the end of the eleventh century. Egypt’s peripheral position, however, placed her outside the main path of European forays, and she remained relatively isolated. During the period in the Fertile Crescent until she was disastrously drawn into them three-quarters of a century later, between 1169 and 1199, she was at best a pawn in the complex and shifting alignments of the Latin states of Syria (under Nur al-Dīn) and the Christian forces of Amalric (Amaury) at Jerusalem, her young Fūtimīd Caliph a figurehead at the mercy of the changing warlords (vintages) of the wāṣirāt (vintages).

When the campaigns that had wracked the country for five bitter years ceased temporarily in 1199, the future of Cairo had been completely altered. Al-Qāhirah had been taken over as the new capital and the only city within the principal competition with commercial Fustat-Misr to an overflown metropolitan inhabited by masters and masses alike. Although the city was nominally still ruled by the Fūtimīd Shī‘a, it was actually controlled by the new Sunni waṣīr, Ša‘līd al-Dīn (Saladin), a participat in the campa

and about it attest the size of its former boundaries.

The city of Misr, formerly almost contiguous with al-Qāhirah, had in fact become a separate entity and the larger al-Qāhirah had become a community separated from it and definitely subordinate to its magnificent neighbor. And so it remained. The present area of the city of Amr (rebuilt under Ša‘līd al-Dīn) was the only surviving section of the old city which had once stretched from the Birkat al-Habash to the Maqāmat heights. The city of al-Qāhirah, on the other hand, profited from this change. Now the true center of the city, during the Middle Ages it expanded into a world capital, reaching its zenith under the Mamluks in the fourteenth century.

Before tracing these developments, however, it might be well to explore the ways in which the pre-Ayyubid settlements not only helped shape the medieval city that evolved from them but left permanent traces in the eology of the modern city as well, for Fustat, al-Askar, al-Qāhirah, and Fūtimīd al-Qāhirah impressed the city of the future both physically and socially. To identify these influences we must return to the present for a moment and review some of the later conclusions of this study. Modern Cairo can be divided into three horizontal segments, the southern, the central, and the northern. Each of these segments is populated by a separate pattern of growth, with each having its separate period of time, each with its own local conditions and pattern being determined by a fairly distinct set of technological and social conditions. The earliest settlements founded during the opening centuries of Islam were confined to the southern third of the present city. The first nucleus in the central segment of the city was Fūtimīd al-Qāhirah, out of which the modern city developed in fairly consistent fashion until almost the end of the nineteenth century. The original city dates from the twelfth century, making a consideration of this latter zone premature here.

The influence of Fustat, al-Askar, and al-Qāhirah on the evolution of the modern city of Cairo is seen clearly on a land use map of the southern zone of the city (see Map IV). This influence has been essentially negative and yet, paradoxically, of utmost significance. The former settlements have rendered useless the land on which they stood and have effectively prevented an expansion of the city to the south. The barriers in the southern portion of the city are of two kinds: the khabar, or mounds of debris which bury former “live” sites and the remains of “Cities of the Dead,” consisting of blocks and blocks of inhabited tomb-dwellings, which make up the modern district of al-Qāhirah.

The southern segment of contemporary Cairo showing early landmarks and present land uses

More than one-third of the southern quarter of Cairo is given over to the mounds of ruins that began to form just south of the Mosque of Ibn Tulun as early as the opening centuries of Islam. Furthermore, an area of the “Abbadid destruction of al-Qāhirah.” By the next century, the outlying portions of al-Askar had fallen into disuse as plagued, famines, and other disasters substantially reduced the population to be housed at Fustat. The flight crept farther south during the twelfth century, finally absorbing those sections of Fustat which had been destroyed when the city was set on fire in 1186. As noted earlier, the only portions of Misr which were rebuilt after the fire were those located near the Mosque of Amr on the river-bottom lands. This new zone, developed chiefly on land which had been below water at the time of its founding, became known eventually as Misr al-Qādīnah (Old Misr), not because the buildings themselves necessarily predated al-Qāhirah, but because it came useful to distinguish between the old seat of central authority and the new capital (Misr), al-Qāhirah. Eventually, all the area east of the Qasr al-Shami and the

[52] Clerget (Le Caire, 1, 153) dates the formation of the khābat from the time of Mustāni (last eleventh century) and remarks that little change in them could be noted until the time of Muḥammad al-Muṣṭaṣir, in Caire: as vie, son histoire, ses peuples (Dél: al-Maṭrīf, Caire: 1953), p. 31, follows Clerget in this, as he does throughout his book, simply adopting the language of his unacknowledged source. Clerget’s own evidence, however, indicates that the ruins cannot have begun to accumulate until somewhat earlier, becoming progressively worse with time. Such must depend upon one’s definition of “vulgar,” a controversy on this point would be sterile.
Mosque of ‘Amr was swallowed up by the encroaching khurāb. To the present, with the exception of two post-1962 public housing projects on Tilil Zaynub and ‘Am al-Širah, these areas have remained absolutely closed to habitation, serving variously as a squatters’ preserve, a municipal rubbish dump, and, most recently, as a site for archaeological excavations, although a major highway now traverses the zone.

Another third of Cairo’s southern zone is made unfit for development by the extensive cemetery which occupies a wide swath of precious land. This cemetery is modern Cairo’s other heritage from the pre-medieval period. Bounded by the khurāb on the west and the sharp incline of the Musqatān range on the east, the Khalīfāh City of the Dead stretches in an elongated U from its gateway, the Bih al-Qarāfāh between the Mosque of Ibn Tulīn and the Citadel, to its southernmost tip almost three-quarters of a mile away. This cemetery contains the tombs of religious and political dignitaries of the ‘Abbāsid and later periods, including the sacred mausoleums of Imām Shāfi‘ī and Sayyidah Naṣfah which are, today as in the days of Ibn Jadeh, among the important meccas for pilgrims. The extension of this cemetery northward paralleled the extension of the city of Fustāṭ."98

98 See The Travels of Ibn Jadhur (Broadhurst translation), pp. 374-43, for an eyewitness account of the tomb city in 1179, and Cherpën, Le Caire 1, 135, for a discussion of the early growth and division within this cemetery.

but it is significant that while the city of the living of Fustāṭ has long since disappeared, its city of the dead—much expanded—continues to house thousands of residents of the contemporary city.

The only land available for a southern extension of the city was the narrow strip abutting the Nile. This is the zone now called Misr al-Qalāmah, practically all of which was built on land that came into existence after the ninth century and was not fully ready for construction until the shifting of the shore had been completed in the fourteenth century. Abandonment of the land between central Fustāṭ and the new city of al-Qalāmah resulted in the gradual isolation of greatly deteriorated Fustāṭ which became merely an industrial port suburb of the new metropolis. By the time of the Napoleonic Expedition in 1798, al-Qalāmah had a population of more than a quarter of a million, while Misr al-Qalāmah had declined to an outing town of no more than ten thousand inhabitants.

The present structure of Cairo, then, reveals a strangely stagnated development in the entire southern third of the city, indicating a complete breakdown of the usual processes whereby new land uses and developments supplanted older ones to create an ever-renewing city. This breakdown, which has resulted in the disuse of large segments of southern Cairo, is one of the most striking elements in the pattern of the present city.

The Ayyūbīd period ushered in a lengthy era during which much of the central segment of Cairo was developed. During the thirteenth, fourteenth, and fifteenth centuries, the city of al-Qalāmah expanded to almost five times the size of its original walled nucleus. And, perhaps of even greater significance, the area it encompassed by the end of the fifteenth century remained almost constant until the latter half of the nineteenth century. This much-expanded city, however, was shaped in part by the physical and social characteristics of its progenitor, the Fustāṭ princely city. Even today the physical pattern of that area shows elements that cannot be understood without an examination of its tenth- and eleventh-century roots.

The city of the Fustāṭ had a social system and a physical shell—partly imposed but partly the inevitable counterpart of its system of social organization—that influenced the form the medieval city was to take.

One of the most striking elements of that social system was its internal organization according to occupation. During late Roman and Byzantine times, the various trades and crafts in urban centers throughout the empire had been organized into corporations or ‘ghulūd’, in which membership was compulsory and through which commercial activities were closely regulated by the state. The Arab conquerors of Egypt left these inherited occupational corporations relatively intact, and they persisted through the end of the ninth century, chiefly as a means for maintaining public regulation over merchants, tradesmen, and artisans.99 That this social organization was translated into a physical order was already evident in early Fustāṭ. Specialized markets were distributed within the city, each market being surrounded with its own quarter in which production and distribution were combined with residences for traders and inns for transient merchants. Thus, even disorderly and crowded Fustāṭ represented an accretion of occupational cells, although some quarters, chiefly peripheral, appear to have been almost exclusively residential.

During the ensuing centuries this form of organization continued to play a role in structuring groups within the urban environment, thereby influencing the physical pattern of that environment. Unfortunately we still lack detailed knowledge of the institutional character of such occupational organizations and of the changes which these institutions appear to have undergone during their many centuries of evolution. Indeed, contemporary scholars specializing in the investigation of Islamic guilds (or occupational corporations) now vigorously deny that, prior to the Turkish period, anything analogous to the highly structured guilds that developed in medieval Europe ever existed in Middle Eastern cities. However, the facts are to be found or seen. Obviously, we are dealing with a form of social organization congruent with the technical level of production, but one which was modified, shaped, and utilized in different fashions by different cultures and even by the same culture over time.

99 On these earlier precursors, see A.E. Balf, ‘Ghulūd, Late Roman and Byzantine,’ Encyclopedia of the Social Sciences (The Macmillan Company, New York: 1933), vol. 1, 260-288. Given the common conditions, it is not surprising to find guildlike prototypes in even earlier societies, for they appear to have been known, in one form or another, in pharaonic, scotic, and other cultures of the area. It is irrelevant for our purpose whether the existence of preceding ‘accounts’ for the emergence of occupational corporations in Islamic cities or even whether exact parallel

10a. Bih al-Fustah at northern wall of Cairo, sketched in 1800

10b. Bih al-Fustah today
THE ISLAMIC CITY

Not only a social order but a physical pattern as well was central Cairo's heritage from the past. The original plan of the Fatimid city was regular and rectangular in the extreme. In addition to the extensive palaces, gardens, cemetery, mosque, and market squares, all of which were concentrated within the centermost core of the walled enclosure, the walled area was separated by fifteen hārāt (pl.) or quarters in which many of the ethnic and religious elements of the walled military units of Mu'izz were installed. Physically, a hārāt (sing.) is a subsection of a city. Having only limited access, usually through a street terminating in an open square, it is equipped with walls and gates which can be closed at night and, in addition, barricaded completely during times of crisis. Socially, the hārāt is a group of persons usually unified by ethnic and/or occupational characteristics as well as by religious ties, and segregated physically and socially from other subgroups of the city. Politically, it is often a unit of administration and commercial life of al-Qāhirah diversified, and in occupational groupings came to dominate more and more of the essential loyalties and identification of the nonmilitary classes, the original hārāt and those established both north and south of the first walls were adapted to the requirements of craftsmanship and trade. Whereas the nonmilitary classes of the earliest hārāt showed a preoccupation with ethnic and tribal affiliations, the names of later hārāt sometimes revealed the dominant occupational or commercial functions of the areas.

There evolved from the Fatimid beginnings a basic form of the city which reflected its social organization and which gave to medieval cities throughout the Islamic lands a similar physical pattern. This pattern has been described by a number of scholars, all of whom have stressed the intimate connection between the physical organization of the city and its social constitution. The basic principle of ethnic-occupational segregation was still operative in early nineteenth century Cairo.

From the earliest settlements Cairo inherited a pattern of land use in the southern section which has persisted into the present. From the Fatimid creation it inherited two equally important elements: the walled nucleus or core of a city which was soon to expand into a major preindustrial metropolis; and a form of social organization which was to make medieval Cairo an outstanding but barely unique example of the Middle Eastern genre of city-building.


Legacy of the Arabs

The heritage of medieval Cairo from its Fatimid antecedent was this essential social constitution which persisted, despite changes in the ruling dynasties and the ethnic composition of the aristocracy, in shaping the old and new portions of the city according to a consistent principle. This principle of ethnic-occupational segregation was still operative in early nineteenth century Cairo.

A brief reference to the role of the mamluks in Fatimid Cairo can be found in al-Qalqashandī, a contemporary of Mayqulī, who described the administrative structure of the government under the Fatimids. The relevant section of his many-volume work has been edited and published by Marvin Canfield under the title Al-Qalqashandi: Les Institutions des Fatimides en Egypte (La Maison des Livres, Algiers: 1974). According to this description, in Fatimid times the mamluks was the third-high-

Encyclopedia of Islam (1938), v. 465-457 and "Qibla, Islamic," Encyclopedia of the Social Sciences (1952), vii, 214-251. It was Masqūnī who suggested that the Timūrid Fātimids introduced a new flavor of religion and even "modern society" internal order between the professional, craft, and commercial corporations which had traditionally been unified chiefly as agencies for state regulation, and drew a connection between the secret societies of the Qāhirah and the guilds of Fātimid Egypt. Detailed statements confirming this view of Fatimid corporate organizations, appeared in Bernard Lewis, "The Islamic Guilds," The Economic History Review, 8 (1935), 155-171; and in Chard, Le Caire, 2, 139-170. For many years his position was widely accepted by scholars, and is echoed in articles in the Shorter Encyclopedia of Islam edited by H.-R. Gibb and I. H. Kramers (Cornell University Press, Ithaca: 1959) under the "Khāsinātūn," pp. 256-257; and under "Trujīl," pp. 571-572. The connection between the historical Qāhirah and the later/Isfāhānī Fatimids is currently rejected, and even Bernard Lewis has recently disavowed his 1937 article, suggesting that it require critical revisions.

A brief reference to the role of the mamluks in Fatimid Cairo can be found in al-Qalqashandī, a contemporary of Mayqulī, who described the administrative structure of the government under the Fatimids. The relevant section of his many-volume work has been edited and published by Marvin Canfield under the title Al-Qalqashandi: Les Institutions des Fatimides en Egypte (La Maison des Livres, Algiers: 1974). According to this description, in Fatimid times the mamluks was the third-high-
Ascent to Medieval Capital
1170-1340

The medieval cycle of Cairo’s growth and decline begins essentially with the accession of Salih al-Din to the leadership of Sunni Islam. It rises sharply within the next century and three quarters, reaching an apogee during the reign of the Barbi Mamul Sultan al-Nasir ibn Qalawun before the middle of the fourteenth century. The city’s fortunes closely reflect those of the empire, for as internal strife and external threats multiply, the expansion of the city comes to a halt. This decline, already perceptible in the early Qaiqarun Mamul period but marked by a temporary revival in the fifteenth century, is transformed into a precipitous descent during the centuries of Ottoman rule. The arrival in 1798 of the Napoleonic Expedition to Egypt brings the cycle to a close, the intrusion forming a bridge between a medieval Cairo much decayed and a modern Cairo yet to be.

The entire cycle was played out within the central section of contemporary Cairo (see Map V). Note that the boundaries of the city in 1800 are merely extensions of those perceptible at the time of Salih al-Din. Expansion occurred predominantly in two directions: southward, pulled by the concentration of political and military power in the Citadel, and westward, conditioned by a recession of the river. These centuries, during which political and economic changes of enormous magnitude took place, were those during which the course of the Nile underwent its most rapid and dramatic transposition. The marked shift of the river bed westward yielded contiguous land which doubled the width of the previous settlement, left the former port of al-Maqis (now occupied by the major railroad station of modern Cairo) completely landlocked, and exerted an irresistible westward pull on the city’s center. Whereas at the time of Salih al-Din, the Khalji Mihit (abhorrent residuum of the former Red Sea Canal) constituted the occidental limit of the city, by the end of the Mamul period its channel bisected the city, dividing the eastern from the western halves of settlement. Thus, political, economic, and physical developments combined to transform Cairo completely during the medieval epoch.

When Salih al-Din first came to power as governor of Egypt, however, there was nothing to indicate that he planned a total transformation of its capital. Little in fact was done immediately, except to refurbish the city by a new set of walls to replace the former enclosures of Jawhar and Badr al-Jamali. Shunning the Fatimid palaces, which were turned over to lesser lords, Salih al-Din set up residence in the Dir al-Wazir just north of the Great Eastern Palace. It was not until after the death of Nusr al-Din in 1174 that Salih al-Din showed the independence of his hand and proceeded to conquer Syria. So successful were his rapid campaigns that only one year later he was invested with dominion over not only Egypt but the North African lands, Nubia, western Arabia, Palestine, and central Syria. It was probably after his triumphant return from these campaigns that Salih al-Din first conceived the plan for his Citadel and for the gigantic walls designed to encircle the two cities of Miṣr and al-Qahirah. The key

1 See Becker, “Cairo,” Encyclopaedia of Islam (1931), I, 824, where he discusses the position taken by Casanova on this point.

V. Expansion of al-Qahirah during the medieval epoch
Ibn Jibayr visited the capital in 1183 and reported that Crusader prisoners in "numbers beyond computation" were being used to construct an "impregnable fortress." 5

Salih al-Din was never to occupy his Citadel, however, for his numerous campaigns against Moslems in Egypt and then against the Crusaders kept him far from Egypt. Even before his death in 1193, construction ceased on the Citadel (by then substantially completed) and work on the ring of defensive walls was interrupted. Only portions of the walls 6 as envisaged were actually in place when he died. Attributed to Salih al-Din are: the wall which ran due west from Bibb al-Furush' across the Khalif Miqrī to the tower on the Nile (Qatat al-Mas'ī) to enclose the port of al-Masq; the eastern wall in two sections, the first of which stretched from the Bib al-Wadī to Durb al-Mahsūq; and the second extending it northward to Būrī al-Zabbār, a portion of the western wall parallel to the Khalif Miqrī and only a narrow distance away from an earlier one, which gave rise to the name "Bayn al-Sanāyī" between the two walls, still a street in today's Cairo. Planned but only partially built were the walls to connect the Citadel with the eastern borders of Fustât and an extension of the western wall along the water's edge.7

Although the interior of the Citadel remained unfinished until Salih al-Din's successor oversaw its completion in 1207-1208 and work on the walls was still going on some 45 years after Salih al-Din's death, otherwise the star 135, undoubtedly too late.

5 The Travels of Ibn Jibayr, p. 43.
6 Salih, *Mash'ār al-Buldān*, iv, 365, gives the extent of the walls completed by the time of Salih al-Din's death as 3.5 *jāriyāt*. On flat terrain, a *jāriyāt* is roughly equivalent to three miles, but since the measure is based on distance an *msq* can traverse within a given time period, a *jāriyāt* on hilly terrain would be considerably less than three miles.

7 For a detailed architectural description of both the walls and the Citadel of Salih al-Din, see K. A. C. Creswell, *The Muslim Architecture of Egypt: Ayyubids and Early Mamluks Mamluks*, A.D. 1250-1350 (The Clarendon Press, Oxford, 1955), pp. 650-659. For the walls, see pp. 651-659. At an earlier time it was believed that the southern wall designed to connect the Citadel and Fustāt was never built. See Lane-Poole, *The Story of Cairo*, p. 177, for this view. However, Yaqūt, writing in the early thirteenth century, noted that Fustāt and al-Qal'bīrūn were "both surrounded by a wall" (*Mash'ar al-Buldān*, iv, 391). Mayqīlī also described a wall near the southern cemetery which appears to be the abortive beginning of the wall planned to surround Mīr. Excavations in the twentieth century have uncovered parts of this wall, conclusive proof that at least a part of the Fustāt wall was constructed, even though perhaps not during Salih al-Din's lifetime. The final wall along the Nile bank was probably never begun.

8 Lane-Poole, *The Story of Cairo*, p. 177, notes categorically that the supposed "completion" was merely the addition of defense towers astride the original wall. On the subsequent construction of the walls, see ibid, p. 59.
changes of note were made in Cairo during his lifetime. It will be recalled that the burning of Mīrāj had crowded the Fātimid city with excess residents, only some of whom could find space in the construction. Having little interest in preserving al-Qahira as a sacra-
crant refuge for the court and contemplating his own private domain in the Citadel, 17ālī ibn Qānnīn opened the city to the masses who, in their need for space, con-
tracted everywhere within the larger streets and maws, gradually effacing the basic outlines of the original symmetrical plan. The major palaces were torn down and replaced by schools and mosques, and former Fātimid villas were converted into commercial structures as the economic life of the area revived after its transplanta-
tion from Mīrāj to al-Qahira.

The extension of the northern wall from the Khālīt Mīrāj to the Nile at al-Maqṣād had important repercussions for the city’s expansion to the west. Now relatively secure from invasion, the port area on the opposite side of the canal offered an attractive building site for a fast-growing and overcrowded city. Nor was the area adjacent to Mīrāj neglected during the early Ayyūbid period. Prior to the completion of the Citadel, the largest contingent of the army was quartered on the island of Rawdah where 17ālī ibn Qānnīn had constructed a fortress. Even after the Citadel had become the true seat of gov-
ernment during the height of the Ayyūbid era, a number of troops con-
tinued to be concentrated on the island.8 This tended to pull the city toward the southwest, but the lack of flood-free land in the intervening space meant that only gardens and winter residences could be laid out in that section. Only later, after a change had taken place in the Nile’s course, were more permanent forms of land use possible there.

But, by far, the greatest transformations took place in the area south of the Fātimid city. Beyond the southern wall, outside the Bīb Zuwaylah, was the quarter of the Sudanese militia of the Fātimids. To sub-
do an invasion of the Fātimid state, the Mamluks built a new fortress bordering the Shāhī 17ālī’s Al-’Aamīr, the Bīb Zuwaylah, and the Sīn Nasīfah tomb and redeployed the area with

8 Clerget, Le Caire, v, 183-184; Maqrīzī, Khams, 18, 86f; Becker, "Cairo," p. 183, notes that from 1181 on, all the troops of Egypt resided in the Citadel, with the exception of the troops stationed on the island of Bilb (the last Ayyūbid Sultan before the transition to Mamluk rule, 1240-1249), who built a fortress and a royal residence on Rawdah. Macra-
hane dates the quartering of Mamluk troops on Rawdah from the reign of Kārīm (1215-1218), see Cairo, Jerusalem and Damascus, p. 60, showing that from the late 13th century on, the island of Rawdah was significant, because it was from their location that the first Mamluk dynasty derived its name, the Bābīy, or water (Nīlī, Mamluk) in its contrast to the later Circassian Mamluks whose power was concentrated in the Citadel, from which they, in turn, controlled the Mamluk state for nearly two centuries. See the discussion in Renen Levy, The Social Structure of Islam (Cambridge University Press, Cambridge, 1957), p. 447.

9 Maqrīzī, Khams, n, 110. See also Clerget, Le Caire, iv, 1:61-
147; Schimmel, Le Caire, p. 144. The destruction of the Su-
danese militia had more than mere topographical implications: al-Shāhī ibn 17ālī ibn Qānnīn abolished the Fātimid army of black slaves and substituted a special force of Kurds and Turks, thus laying the groundwork for the Mamluk dynasty, which dominated Egypt for nearly a century. See the discussion in Renen Levy, The Social Structure of Islam (Cambridge University Press, Cambridge, 1957), p. 447.

8 Saif-ed-Din al-Qalawīn, History of the Crusades, pp. 158-200; Ehlī, History of the Arabs, pp. 675-676; Sir William Muir, The Mamluks or Slave Dynasty of Egypt, 1260-1353 A.D. (Smith, Elder & Com-

10 Shāhī, ibn 17ālī ibn Qānnīn, died in 1219, see ibid., pp. 158-200; the tyrant was accompanied by his son, who was designated as successor. See also Lane-Poole, Story of Cairo, pp. 158-200; Ehlī, History of the Arabs, pp. 675, 676; Sir William Muir, The Mamluks or Slave Dynasty of Egypt, 1260-1353 A.D. (Smith, Elder & Com-

11 See Lane-Poole, Story of Cairo, pp. 158-200; Ehlī, History of the Arabs, pp. 675-676; Sir William Muir, The Mamluks or Slave Dynasty of Egypt, 1260-1353 A.D. (Smith, Elder & Com-

12 See Lane-Poole, Story of Cairo, pp. 158-200; Ehlī, History of the Arabs, pp. 675-676; Sir William Muir, The Mamluks or Slave Dynasty of Egypt, 1260-1353 A.D. (Smith, Elder & Com-
internal stability and external security he achieved en-
couraged the growth of the city. Development in the
area north of Salih al-Din's walls (Hūrāt al-Husaynīyah)
was aided by his construction of a mosque (al-Zāhir) and
a palace there. Land formerly in agricultural use
began to be converted to urban purposes, particularly
in the al-Lūq section west of the Khālij Miṣrī and in
the Saydah Zaynab area southwest of the walled city.16
It was in this latter district that Baybars constructed his
famous Lūnayr's Bridge over the Khālij.

The forays against Crusaders and Mongols, which had
preoccupied the Mamluks during the reign of Baybars,
continued through the Sultanate of his second successor,
Qalāwūn. But, as in the case of Baybars, the campaigns
still left time for the development of Cairo, including
the famous hospital which Qalāwūn had erected in the
heart of the walled city.17

It was, however, during the reign of Qalāwūn's son
and successor, al-Nāṣir, that relative tranquility
and peace permitted a true flowering of Mamluk culture
and a major expansion of the Mamluk capital, Cairo.
Enjoying the largest extent of any Mamluk ruler, al-Nāṣir
first became Sultan in 1293 as a boy of about nine under
the control of powerful amirs. Twice replaced, each
time he remained longer powerful than before, and during
his third reign (between 1293 and 1319), which is often
known its period of greatest security and calm. Peace had
finally been concluded with the troublesome Mongols
from whose threats the Mamluk state was freed until the
rise of the Mamluks in the late thirteenth century.18

These were critical years, not only for Cairo's develop-
ment but for the entire Islamic empire. This was the
time of the religious traveler, Ibn Battūtah, the birth
succe

sor as well as the Mamluk who followed. Information on
the characteristics and activities of these spice merchants
can be found in S. D. Goitein, "New Light on the Beginnings of the
Klitim Merchants," Journal of the Economic and Social His-
tory of the Orient, Volume 3, Part 2 (April 1958), pp. 175-185, which
treats their appearance and role during the Fatimid period as revealed
through the Geniza documents. See also, Gustave Wiet, "Les
marchands d'épices sous les sultans Mamlouks," Cahiers d'His-
and Walter Fischler, "The Spice Trade in Mamluk Egypt: A Contri-
bution to the Economic History of Medieval Islam," Journal of
the Economic and Social History of the Orient, Volume 3, Part 2
(April 1958), pp. 175-174, both of which deal with developments
during Mamluk times.

16 S. Fatima Sadafzy, Baybars I of Egypt (Oxford Uni-
versity Press, Dacca, Pakistan: 1958), which includes a short biog-
ography as well as an English translation of Sīrat al-Malik al-Sālih,
a contemporary account of his exploits. See also Ma'īn, The
Mamluk or Slave Dynasty of Egypt, for a chronology of Mamluk
reigns; and, for an overview of the relationships between Mongol
incursions and repercussions in the Mamluk empire, see P.K.C. Bagley, trans., The
17 Margoliouth, Cairo, Jerusalem and Damascus, p. 71; Becker,
"Cairo," p. 845.

18 Margoliouth, Cairo, Jerusalem and Damascus, pp. 71-72.
A group of Tatar colonists settled in this district.
19 Margoliouth, Cairo, Jerusalem and Damascus, pp. 79-87; Lane-Poole, The Story of Cairo, p. 212.
20 Nicolas, Urban Life in Syria Under the Early Mamlu-
ks, pp. 81-82.
21 Lane-Poole, The Story of Cairo, emphasizes on them
22 Margoliouth, Cairo, Jerusalem and Damascus, pp. 85-92.
23 He died in 1444, having written, in addition to a histori
work of great magnitude, his famous Khidr, which was both a history
and topography of Cairo.
24 Margoliouth, Khidr, t. 360.
25 Ibid., t. 95.
26 See ibid., pp. 95-106, where he enumerates and describes the major markets of the city.
17. Tomb city (probably Bab al-Nasr cemetery) ca. 1800
the northern wall and the agricultural suburb of Matariyeh (near Helopoli) was empty desert. During the Fatimid era were quartered in the western half of this area while the eastern section served as a stopping place for caravans. It was not until the middle of the eleventh century, at the death of Badr al-Jamili, that part of the eastern section was converted into a cemetery (the Bab al-Nasr cemetery containing the tomb of Badr al-Jamili, which can still be seen from the north wall). The area, however, received its strongest impetus to growth during the period of Baybars, when it became "one of the greatest sections of Miṣr and al-Qiblah." By al-Nasir's time, the entire area between Bab al-Nasr and the troop assembly grounds at al-Raydaniyah was completely covered by buildings, interspersed with tombs.

Developments in the north, however, were quite overshadowed by those occurring outside the southern wall of the city. This had become, by the end of al-Nasir's reign, the most populous district of Zahir al-Qiblah. It will be recalled that this area had once housed the Sudanese soldier-slaves of the Fatimids, whose haram was represented by Salih al-Din. In the late Ayyubid period, the amirs constructed palaces and luxurious villas along the shores of Birkat al-Fil (midway between the southern wall and the Citadel), but it was not until the third reign of al-Nasir that systematic and vigorous construction in this district began. The result was an intensive development stretching from Bab Zowaylah to the Citadel-Mosque of Ibn Tülin-Sitt Naṣīḥah tomb limits on the south, and from the Mount of the Nile on the west. Even the Great Qatiba (the Khalifah City of the Dead parallel to Fustat) became a popular residential zone all the way from the Bab al-Qatiba southward to the Tomb of the Imam Shafi'i.

Maghaira tells us that before the third reign of Sultan

18. Bab al-Nasir cemetery today
al-Nasir there were no buildings at all in the bily area east of the city which today contains the Mamluk City of the Dead (including the masterpiece mausoleums of Barqiyya, Inaj, Qayt Bay, and other Cemar sian Mamluk rulers). It was not until 1320, when al-Nasir abandoned the use of a maydan which formerly stretched between the Bab al-Nasr cemetery and the mountain, that buildings began to be constructed in this area. However, developements during his reign were minimal in comparison to the growth that was to take place during the following centuries.

Whereas the growth in the northern and southern suburbs was but a more vigorous continuation of previous developments, the western section truly owed its transformation to the public works of al-Nasir. Most of the buildings in that section were constructed after 1332; before that time the area had been occupied by seasonal gardens or submerged under water. Beginning at the time of Salih al-Din, the Nīk's recession exposed the Jazirat al-Fil and later stranded the port of al-Mansūr. In this process, many islands and sand bars were formed, more in each successive year, until some of the higher points in the drying riverbed were flooded only a few days each year. The Mamlikus used the newly vegetating lands for hunting, archery practice, and other sports. In 1335, al-Nasir proclaimed the area open for settlement, and all the high lands along the new river edge at Bilālq and the Jazirat al-Fil from al-Laq to the village of Minaṭ al-Stuḥn began to be filled with orchards, farms, and palatial residences.

The chief factor that encouraged the growth of the western suburb was the canal which al-Nasir ordered to be dug there. Sultan al-Nasir was justly famous for his public works, but none had as much impact on the

38 For the eastern cemetery zone, see ibid., 1, 356, 91, 935. To illustrate the extent of the developments, Maghaira cites the case of the Jazirat al-Fil (present-day Stroke) on the eastern island in 1331 there were only 20 buildings (orchards or gardens) whereas in Maghaira's day about a century later, the area contained more than 200.

39 See Mars, The Mamluk or Slave Dynasty of Egypt, pp. 79-81, for a partial enumeration.
vated by the excavation of Birkat al-Najíri in the vicinity and the establishment of a checkpoint on the main road between Cairo and Miṣr, it began to show the first stirrings of urban growth. At Maqrīzī’s time, all the buildings in that section dated from the period of al-Najīr.68 Map VII summarizes the major developments which resulted, by the end of Sultan al-Najīr Ibn Qalāwūn’s lengthy reign, in a Cairo which had attained almost the same dimensions she had by the time of the French Expedition at the turn of the nineteenth century. A community of vast extent and enormous population, sustained by international commerce, nurtured by a rich agricultural hinterland, and protected by an era of peace, she had become the foremost capital of the East. This was the city which the Baedeker of the time, Ibn Battūtah, called “Mother of cities . . . mistress of broad provinces and fruitful lands, boundless in multitudes of buildings, peerless in beauty and splendour . . . she surges as the sea with her throns of folk and can scarcely contain them for all the capacity of her situation and sustaining power.”69 This glowing description of Cairo, written at the pinnacle of her development, may perhaps serve also as her epitaph, for only a short time later she was to begin her long decline.

68 Ibíd., II, 256.


60 Maqrīzī’s account of the canal and its impact upon urban expansion in the western zone is found in Khaṭāʾ, 131, 145 (most detailed), and 162. Quotation taken from p. 145.

The Decline and Fall

Alas, it is all gone, except for very little . . . deteriorated . . . ruined . . . deserted. . . . What remains of it pains me to see.

Tires are the lamentations which appear as dismal chimes in the chronicles of the voluble Kāhirah 70 of Maqrīzī who described the city she knew in the second and third decades of the fifteenth century. Less than a century had passed since the panegyric of Ibn Battūtah.

The decline of Cairo had, in fact, taken much less than a century. Only sixty years of political dissvision at home, of plague and famine throughout the empire, and of renewed Mongol invasions had been sufficient to undo much of the progress that had been achieved by 1350. Just as the zenith had been reached during the era of Sultan al-Najīr Ibn Qalāwūn, so the penultimate nadir at the turn of the fifteenth century coincided with the reign of Sultan al-Najīr Faraj ibn Barquq. The intervening events read as an unrelieved chronicle of doom.

Political instability was certainly a chief factor in the decline. After al-Najīr’s death in 1355, one after another of his very young sons was elevated to the Sultanate, each a pawn of powerful but dissimled amirs, each speedily and bloodily deposed as the factions gained and lost. So disorganized a state was in no position to resist when natural disaster struck. Disaster, world-wide in extent, came stealthily, clothed as the Black Death. While the history of Egypt is rife with plagues and epidemics, this was a plague “the likes of which had never been known before in Islam.” Arriving in autumn of 1349 from China by way of Asia Minor, Syria, and the Mediterranean region, the bubonic plague spread from the coast through the Delta until it reached Cairo. While by the first month of the Arab year it had contaminated all of Egypt, it did not reach its peak in the city until between the sixth and ninth months. By spring, Cairo’s “streets and market places were piled high with unburied corpses.” A few weeks later, “Cairo had become so desolate . . . [that] a person might walk all the way from the Bib Zawālah to Bīb al-Najīr [i.e., the busiest street of the city] without even being jostled.” Whole streets and quarters were deserted and all the cemeteries were filled to overflowing, burial trenches and communal graves an unavoidable expedient.71 That the bubonic plague, which returned twice more within the decade, took an incredible toll in lives is unquestionable.72 While Maqrīzī’s estimates are ludicrous exaggerations,73 the mortality in Cairo alone must have reached 200,000, a not insubstantial figure for a city which at its height had a population of perhaps half a million.74 When to this is added the flight of many residents into the countryside and the deaths from the famine that followed, one can well believe that Cairo, at least temporarily, was reduced to a ghost city.

The crisis brought about by the plague seems to have done little to assuage the political difficulties. Four more ineffective successors of the house of Ibn Qalāwūn followed one another, compounding pestilence and famine with rebellion and misrule. And then, as if these burdens were still too light, in 1360 the Mongols under Tamerlane again commenced their small forays, presaging a future threat to the empire. It was at this point that the amirs turned in desperation to the talented general, Barquq, who became in 1382 the first Circassian Sultan and the founder of the Burji (Citadel) Mamlyuk dynasty that was to rule Egypt until the Ottoman conquest in 1517.75


71 According to this account, 10,000 to 20,000 persons died daily in al-Qahirah and Miṣr (Ibíd., p. 773), and within the two most disastrous months, 900,000 corpses were piled in the two cities, not including the suburbs (Ibíd., p. 780).

72 These are very rough estimates. The population of Cairo at the time of the French Expedition was between 250,000 and 280,000. During the reign of al-Najīr Ibn Qalāwūn, it undoubtedly exceeded this number, but not by more than double. Statistics on death were not kept during this plague in Cairo. However, statistics which are reported for the city of London which it experienced the last of its bubonic plagues in 1665 indicate that for a city of that size, taking minimum health precautions, mortality ranged from several thousand to 6,000 dead each week during the height of the plague. Even doubling these figures yields a total which does not exceed 20,000. See the semi-factual account of Daniel Defoe, A Journal of the Plague Year (A Signet Classic, The New American Library of World Literature, New York: 1960), which also conveys an emotional understanding of a plague’s impact.

73 Maqrīzī, The Mamluk or Slave Dynasty of Egypt, pp. 101-101, 105-116. An indispensable source on the Circassian Mamlyuk period is the Annals of Ahmad ibn al-Dschihān ibn al-Tughlī, which have been translated by William Roger under the title History of
Irrespective of Cairo, despite her continuing problems, had already begun a remarkable recovery from the plague\footnote{with only one brief interruption}, reconstruction went on at an even faster rate. Most of the rebuilding, however, was concentrated in the central portion of the walled city, with the areas outside the walls still abandoned or severely depopulated. In 1348 work began on the Baraqq college mosque in Bāyān al-Qāriyān.\footnote{Several of the areas of central Cairo were rebuilt by Baraqq, and a new commercial area, known to all tourists of modern Cairo as the Khan al-Khalili, was developed at this time.} The condition of both al-Qīhirah and Mīrū-Fustāṭ at the time of recovery under Baraqq has been described in detail by Ibn Daqiqayn, the teacher of Maqrīzī, who wrote his series on the cities of Islam some thirty years before his pupil.\footnote{Popper, History of Egypt, Part I (1954), p. 12.}

\begin{itemize}
\item \textit{Ibn Daqiqayn (d. 1408) wrote an encyclopedic work on ten cities of Islam, the Kitāb al-‘Aısār al-‘Ābādī l-‘Abarī.}
\end{itemize}

20. Bazaar of the Coppersmiths in early 13th century

21. The Khān al-Khalīlī (14th century) still frequented by tourists

The revival under Baraqq, however, proved to be but a respite rather than a reversal of Cairo’s fortunes. The plague returned in 1379-1380,\footnote{Ibid., pp. 118-119.} and an insurrection in the latter year, in which Baraqq was temporarily overthrown, turned the city again into a battlefield.\footnote{Popper, History of Egypt, Part II (1954), p. 93.} Baraqq was restored to power in 1390, but dissension and economic difficulties continued to harass him, as they did his successors for years to come. Furthermore, the Mongols were approaching. By 1393 they held Bagdad, poised for their invasion of Syria in 1395. Thus, an empire on the verge of disaster was the bequest which Baraqq left to his thirteen-year-old son, al-Nāṣir Faraj, when he died in 1399.\footnote{Maqrīzī’s verdict on al-Nāṣir Faraj is harsh indeed, and from what we have seen above, somewhat unjust. In his words:}

\begin{itemize}
\item As-Nāṣir was the most ill-natured of all the rulers of Islam, for by his mismanagement he brought ruin upon all the land of Egypt and all of Syria from the source of the Nile to the outlet of the Euphrates. And the tyrant Tamerlane invaded Syria in 1403 (1405) and reduced to ruins Aleppo. . . . Famine struck Egypt from 1406 (1407) to . . . More than half of Cairo’s estates and environs were ruined; two-thirds of the population of Mīrū died of famine and plague; and voting one volume to each city. While much of his work was lost, the volumes describing Cairo (including Mīrū and Alexandria) are preserved. The Cairo manuscript has been edited by Karl Vollert and published under the title, Description de l’Egypte (Imprimerie Nationale, Cairo, 1893).}
\end{itemize}

\begin{itemize}
\item Popper, History of Egypt, Part I (1954), pp. 19-33.
\item Ibid., pp. 133-38, 60-64.
\item Faraj’s reign is covered in Part II of Popper, History of Egypt (1954).}
\end{itemize}

 As quoted by Ibn Taghri Birdī, ibid., pp. 157-159. Ibn Taghi Birdī is far more measured than Maqrīzī in his view, all the more remarkable since it was at the hands of al-Nāṣir Faraj that his family was victimized. He calls attention to the poor food in 1393, famine, and the plague, which in½publicized “a series of events and trials in which more of Egypt and its provinces were ruined, not only because of the failure of the inundation but also because of the lack of harmony in the government, . . .” ibid., p. 56.

\begin{itemize}
\item Maqrīzī, Kitāb, 11, 23, 111, 126, 124.
\item Popper, History of Egypt, Part II (1954), p. 179.
\item On the growth of the eastern citadel (the so-called Tombs of the Caliphs), see Popper, History of Egypt, Part II (1954), p. 166. It was in this zone that al-Nāṣir Faraj built the exquisite mausoleum for his father which still dominates the district. On development in the southern or Great Qal’ah, see Guest and Richmond, “Mih in the Fifteenth Century,” p. 89.
22. Mu‘ayyad Mosque and the twin minarets above Bab Zuwaylah ca. 1840

kets—for candles, gold and silver ornamentation and bridles for horses—sold for lack of customers; even the prostitutes felt the impact of the depression. Residential quarters suffered a similar fate. The hārāt within the eastern and northeastern sections of the walled city (for example, Hīrāt al-‘Uqīfīyah, Hīrāt al-Barqāyah, see Map IX) were deserted at their fringes and decayed into shams near its city’s center.\(^{34}\)

It is perhaps significant that almost all the hārāt of the city and its environs listed by Maqrīzī were located within the longitudinal belt stretching between al-Ḥuqūyah (south of the walled city and the Citiadell down the south of the wall’s enclave. It is perhaps also significant that only 37 of the 37 hārāt identified by Maqrīzī were noted as still in existence. (See Map IX and its accompanying key for the names and locations of these enumerates by Maqrīzī.) Thus, by the opening decades of the fifteenth century, if we are to be guided by the

famous topographer, Cairo had diminished in extent and population, had retreated toward the portions settled before the expansive era of al-Nāṣir ibn Qalawūn, and had suffered a severe setback in prosperity and commercial activity.

The fifteenth century did witness a temporary economic revival which again filled the markets with goods, the streets with , and the markets of the city. However, the presence of the garrison, the custom with fairs, the exchange of goods on a small scale. Toward the end of its lifetime, Maqrīzī himself saw and acknowledged the beginning of this revival and noted the reconstruction of certain areas which had formerly been deserted.

This revival was sluggish and faltering during the harassed reigns of Babqūq’s two young heirs and their successor, al-Mu‘ayyad, a leading amir and munificently Mamluk of Babqūq’s household. His accession marks the demise of the hereditary principle of succession to the Sultanate of Egypt, for thereafter, although lip service continued to be paid to natural (and often infant) heirs, who were occasionally elevated to the throne, real power lay in the hands of those princes fortunate enough to consolidate their strength—by murder or imprisonment of weaker rivals or by uneasy alliance with those whom they could not eliminate—in a precarious bid for legitimacy. One of the most successful of these new rulers was Barsbey, another manumitted slave from the house of Babqūq. By 1421 he was the regent for an infant heir again to be displaced when he had himself proclaimed Sultan in 1422.\(^{35}\)

While Barsbey was powerless to undo the disastrous effects of the bankrupting campaigns and natural catastrophes that were irreparable, he was successful in gaining time before the eventual collapse through his exploitation of the renewed trading opportunities facilitated, ironically, by Tamerlane’s victories. Since it was Egypt’s monopoly of the East-West spice trade that helped maintain fifteenth-century Cairo’s prosperity and that led to a final change in the ecology of the city, we might discuss here to trace the relevant shifts in the trade route.\(^{36}\)

\(^{36}\) See Proper, History of Egypt, Part I (1957), 73a for the world history of succession through Barsbey. An excellent study of developments under Barsbey is to be found in Ahmad Darrag (Darrag), L’Égypte sous le règne de Barsbey: 1424-1427-1432-1435 (Études Françaises de l’Islam, 24) (1961), upon which the present section has been drawn. Darrag gives the dates in 1424-1427-1427-1432-1435-1435-1432-1435, and again in 1435. They were to become an endemic condition Egypt throughout the successive centuries of occupation.

\(^{34}\) See below for a discussion of the port at Hiliyā.

Tamerlane’s advances had disrupted the arteries over which most of the trade between China and the Crimea had flowed, causing it to be deflected once again to its older route through Persia (Qazvin) and the Bīlās Sea. Unsuccessful attempts were made to reopen the central land route, but by the second decade of the fifteenth century virtually the only access from China to the West was obtained through India. This was, however, still an insecure passage not yet firmly under Egyptian control. The ruler of Aden had imposed “virtual reinsurance” on the Kārimi merchants to float northward to Jiddah. The Chinese emperor had vowed vigorous prosecution against his interference with trade. Thus commerce was already being channelled through the Hājij ports when Barsbey strengthened his hold over them. With Yemen no longer an important rival in the spice trade, traffic flowed into the restored and improved ports of Jiddah, Tārī, and Qalāqun (Suez), where it came under the government monopoly managed by Barsbey. The Kārimi merchants, formerly an independent economic force, were reduced to middlemen who transacted business for the Sultan;\(^{40}\) the southern trade route (from Aden to Qasrصر to Qasr Al Fuhseh, by boat, to the old port of Misr) was abandoned in favor of a more northerly course from Qalāqun across the eastern desert to Cairo, a shift that was to have radical implications for the city’s port facilities.\(^{41}\) These changes bolstered the economy of Egypt, despite the growing decimation of its underlying agricultural base, and created a superficial glow of health upon her visage to the world, the capital city of Cairo.

Nor had that city ever been as in dire a state as Maqrīzī claimed. It was perhaps only to one who glanced backward and compared her present with her former glory that she seemed so decadent. Certainly the rest of the world viewed fifteenth-century Cairo in a more favorable light, recognizing her still as one of the most important cities of the world. To European travelers who began to visit Cairo in small but increasing numbers she repre-

\(^{40}\) See Louis Massignon, The Culture of Islam (Becker and Warburg, London: 1946), 92-93. Massignon gives the following comparative figures: London, 25,000; Naples, 15,000; Milan, 30,000; Padua, 15,000; Lisbon, 40,000; Antwerp, Amsterdam, each ca. 100,000. At the turn of the sixteenth century, Paris had only 84,000 inhabitants.

\(^{41}\) See Ferdinand, “Les Travaux et Activités,” 1435-1439,(trans. and ed. by Meliton Latsis (George Routledge and Sons, Ltd., London: 1906), see pp. 72-70. Chapter 8 and 11 contain material on Cairo. Note the use of the term “Bālāmīya” to refer to the entire area including Būtān Mīr and Misr al-Qāhirah.

\(^{42}\) See the account of Mamluk Em. R. Menahem in Elkan N. Adler, ed., Jewish Travelers (George Routledge and Sons, Ltd., London: 1930). Quotation appears on p. 166, and description of Egyptian ports is from his description of El-Helmi. What I have learned is that I still remain, and few people live there... (p. 166) "...in the New Misr there is not even a single house in it in ruins" (p. 165).

\(^{43}\) Among these are Plïkē, L’égypte au commencement du quatorzième siècle, 110-112 (Paris: de Broglie, 1893). Letters are preserved in Adler, Jewish Travellers, pp. 233-235 and Présé Félix Fabri, whose impressions of Cairo have been reconstructed by Hildo Personi, Once in Sinait: The Further Pilgrimage of Félix Fabri (Eyeke in Sportwoud, London: 1957), see particularly Chapters 9, 10, and 11.
VIII. Plan view of Cairo and environs in the middle of the eighteenth century

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text continues on page 43
Map X shows one reconstruction of the physical extent of Cairo at the middle of the fifteenth century. It is taken from the work of William Popper, editor and translator of the chronicles of Ibn Taghribirdi, to whom we have had occasion to refer earlier. As can be seen from this reconstruction, by mid-century practically all of the southwest quadrant of the city had been redeveloped. The lengthy belt between al-`Usayriyyah and the Citadel was intensively settled and, in fact, beginning to deteriorate with age. The least developed quadrant of the rectangular city was the northwest section, but this was soon to be built up.

It was during the latter half of this final century of independent Mamluk rule that two developments of lasting significance transformed Cairo. These were the port development at Biliq, already noted above, and the settling of the district called Askabiyah, in the northwestern section of the city. It is also of utmost significance that these were the very last additions to the medieval city. The preindustrial city which evolved into its final form after these developments remained virtually constant in extent and size for the ensuing 300 years. For all purposes, the city found by the French Expedition in 1798 and mapped by them with such detailed precision was almost identical in shape to the medieval city of the late fourteenth century. A comparison of Map X, which reconstructs the city circa 1460, with Map XI, prepared by the French Expedition at the turn of the sixteenth century, gives dramatic proof of this remarkable fact.

Biliq (see Map V for location) first emerged as an island in the Nile during the opening decades of the fourteenth century. Under the encouragement of al-Nasir ibn Qalawun's development policies it became an upper-class suburban area where princes and wealthy government officials built winter palaces amid the orchards of their agricultural estates. Gradually, these expansive uses gave way to more intensive developments, including year-round residences and auxiliary commercial services. But Biliq was not yet a port, even after the eastern arm of the Nile had dried completely, although sailing vessels were anchored along it. At the time of Marzirzi's Khitaft the semi-detached mainland of Biliq was well populated, primarily by the well-to-do, but the topographer assigns neither industrial nor transport functions to it.

We first learn of its port functions in conjunction with the launching of a newly built navy dispatched by Bars-

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89 One can trace this transition clearly, although the historians and chroniclers are unaccountably vague on the details of the port development at Biliq. During the time of Pilgrim, i.e., ca. 1490-1493, the main port was still at Misr (or Babylonia, as he calls it). Goods coming by caravan across the desert from Mecca came first to Cairo and then passed on to Misr for the levying of customs and for trans-shipping. See L'Egypte au commencement du xiv<sup>er</sup> siècle, pp. 29-47. When Pero Tafur came to Egypt in 1455-1456, he disembarked at Misr, spent the night in that city, and then proceeded by donkey to present his credentials at the Citadel. See Pero Tafur, Travels and Adventures, pp. 70-74. It is significant that none of the later European visitors to Cairo mentions a port at "Old Misr" or Babylonia. By the second half of the fifteenth century, overland caravans crossed directly to Biliq from north of the city, and all goods and passengers from or to Europe passed through the port at Biliq. These travelers who specifically mention disembarking at Biliq are Friar Felix Fabri (1487), see H. Preissner, Osio a Sinai, p. 179, Berthier (1473-1470), see Adler, Jewish Travellers, p. 233; and Domenico Treviasso (1512), see Jean Thesnaud,

bay in 1459 to conquer Cyprus; after 1478, when control over the trade at Jiddah became absolute, it is increasingly mentioned as a port and as a dispatching point for the navy. By the middle of the fifteenth century, the former island, by then joined to the mainland even in flood season by two raised causeways, had become the major port serving the city of Cairo and had begun to develop the wholesale and industrial character which the area retains to this day. This transition continued despite, or perhaps even facilitated by, a fire in 1459 which virtually destroyed the town, permitting it to rebuild in a form more suited to its changing function. It would not be unreasonable to link the expansion of this part to the alteration in the main route of the spice trade, for with the decline in the previous Nile route downstream from Qasr, the port at Mīr was no longer conveniently located; a more northerly location was called for, accessible to the eastern desert caravan route that terminated north of Cairo at the Pilgrim's Lake (Birkat al-Muzārij). When this change first occurred at the time of Barbars, Mīr al-Qasimāh still remained the commercial port of the city, but by the end of the century all boats carrying wares between Cairo and Alexandria (and beyond, to Europe) docked at the new port facilities at Būlāq, a mile-long donkey ride through farmlands to the built-up part of al-Qahirah. In Būlāq also were constructed the warehouses, inns, and other facilities for the great caravans that carried goods overland between Cairo and the Red Sea ports. Thus Būlāq became the key link and harbor in the pan-Arab East-West spice trade which in large measure underlay the comparative prosperity of the fifteenth century. Despite a decline in trade during the centuries that followed, Būlāq continued to serve this function. When the French arrived at the end of the eighteenth century, they found this port town still intact and still separated from the city of Cairo by agricultural lands.

The setting of Azzbākhīyeh, now part of the central business district of the "Westernized" city and the geographic heart of the metropolis, also occurred toward the end of this last century of growth. Its site, midway between the abandoned industrial port of al-Maqār on the northeastern agricultural lands of al-Qalqīlīyah to the south, had been a wasteland before its development into an upper-class suburb during the later decades of the fifteenth century. In early times the land just south of al-Maqār, between the Nile's former shore and the Khalji Miṣrīs, had been occupied by a large plantation called the Bastūn al-Maqārī. In 1051 the trees of this orchard were cleared to make room for a large port (Birkat al-Muṣṭafá) which was excavated there. However, during the difficult times of Mustansīr toward the end of that century, the deserted banks of the pond became a thieves' quarter and the area was otherwise abandoned. Over the centuries, yearly silt deposits gradually filled in more and more of the pond until, by the time of Maqrīzī, the zone (Kur al-Jilāl) had become almost entirely sand dunes. Only a tiny remnant of the pond still survived.12 A few decades later, when Ibn Taghīr al-Birdī was writing, evidently even that last remnant of the pond had disappeared.21 So the area remained until 1479 when Aḥmad, an amir of the Sultan Quṣūt Bay built a stable and then a residence in the zone which today still bears his name. He had the sand heaps removed and the land excavated anew for the Birkat Azzbākhīyeh which was flooded by waters from al-Nāṣir's Western Canal. Along the banks of this beautiful pond many of Cairo's merchants and princes built luxurious dwellings, and the area whose growth must have been stimulated by its proximity to the new port and harbor in Būlāq and the Birkat al-Muṣṭafā in the Old Market. By the end of the fifteenth century, Azzbākhīyeh had become one of the most fashionable districts of suburban Cairo, a veritable "city in itself," serving as a refuge for the wealthy from the noise and dirt of the city.

These developments were, perhaps, the last burst of energy before final stagnation. Certainly the two factors that were to bring the medieval cycle to a close were already at work: Egypt's shift in world trade routes which undermined irreversibly the last economic base of the community; the other was the rise of the Ottoman Turks whose conquest of Egypt deprived Cairo of her political hegemony. The sixteenth, seventeenth, and eighteenth centuries were to reduce Cairo to a provincial capital of declining importance, and not until the nineteenth century would Cairo be revitalized. We have seen that the element which had sustained Cairo even up through the fifteenth century—despite political disorders, declining agricultural production, current famines, and recurring epidemics—was the Oriental spice trade with Europe, still virtually monopolized by Venetian traders who routed their commercial exchanges through Egypt. This concentration of the East-West trade in the Mamluk era also contributed to the rise of the Mamluk class, which came to enjoy not only a documented increase in income but also in status and influence. The Mamluks were thus able to penetrate the East-West spice trade by means of costly presents, scholarships, and privileges. The Mamluks were thus able to penetrate the East-West spice trade by means of costly presents, scholarships, and privileges. They were able to penetrate the East-West spice trade by means of costly presents, scholarships, and privileges. They were able to penetrate the East-West spice trade by means of costly presents, scholarships, and privileges. They were able to penetrate the East-West spice trade by means of costly presents, scholarships, and privileges.
Ghiri, launched a newly built Egyptian fleet to break this hold, it was destroyed by the Portuguese in 1509. Thus, the Mamluk rulers remade the foundation stone of Mamluk prosperity, left Cairo with a depleted economic base, and, in so doing, reduced Mamluk power to its lowest ebb. This decline was well under way by the early sixteenth century, and it is not surprising that the new Venetian ambassador to Cairo wrote in 1512 that the city was much "inferior to her reputation," albeit still very wealthy and "with money in abundance." In fact, that, with their coffers so depleted, the Mamluks were unable to raise a sufficient force when the Ottoman Turks turned their attention from Europe and Persia to the lands of the Mamluks. 14

Some eleven years after the death of Maqrizi and forty-five years before Vasco da Gama's historic voyage, the rising Ottoman Turks took Constantinople, signalling a new balance of power in the eastern Mediterranean. The Mamluks of Cairo rejoiced, little realizing that the event augured ill for their future. The impact of this victory was not soon felt in Egypt, however, since for more than half a century the Ottomans directed their efforts toward Europe and then toward their eastern rivals, the Persians. Only in the sixteenth century did they concentrate their attention on Egypt. Subsequently, the Ottomans led their Mamluk forces to Syria for a disastrous encounter with the Ottomans near Aleppo, in which al-Ghiri was slain and his forces routed. They returned in disorder to make a final defense of Cairo. Tomayyab, the newly appointed (and last) Mamluk Sultan, refused to capitulate, and within five months the Turks had pursued the Mamluks to their capital. An extremely high Nile that year had driven many of the lower lands of western Cairo into the city proper and, when it was reported that the Turkish troops of Salim were approaching, panic drove thousands of the suburban residents into the confines of the walled city. The Turks arrived and speedily vanquished the Mamluks in a decisive battle, thus gaining possession of the city and, with it, the land of Egypt. Perhaps the mundane eyewitness account of Ibn Iyas conveys better than any rhetoric the full impact of that defeat.

On Wednesday . . . news arrived that Ibn 'Othman's advanced guard was at Birkal al-Huj, which put the military in Cairo into an advanced state of great consternation. They closed the Bab al-Funuh and Bab al-Nour and the Bab al-Shar'iyyah, also the Bab al-Bahr and the Bab al-Kantarah, and the other gates of the town. The markets in Cairo were closed, the mills were stopped, and bread and flour became scarce. . . . On Thursday . . . a tremendous engagement took place. . . . In the short space of about sixty minutes the Egyptian army was defeated and in full retreat. . . . On Sunday . . . it was reported that the Sultan Selim Shah had moved his camp from Raindaynuch [the scene of the major battle, north of the walled Cairo] to Bulak, where it occupied the ground from the embankment to the end of the island, and that the keys of the citadel were brought there. . . .

In such a manner did Cairo—which had ruled for almost 550 years over the prosperous and extensive Fātimid, Ayyubid, and Mamluk empires, which had been an unrivaled center of world commerce, which had been the undisputed model of culture for the Islamic world, and which was still the largest city of the Middle East and Europe—pass into the hands of the Turks, to become a mere provincial capital subordinate to Constantinople. With the passing of the keys to the Citadel went the symbol of the city's independence and supremacy.

For the next few centuries without interruption, Egypt remained nominally under Turkish rule, although after only two generations of vigorous Ottoman leadership, the old Mamluk regained much of their former power. By the seventeenth century the country was little changed administratively from what it had been under independent rule (with the exception of the Druze and the Mamluks, the last chief знать of a major revolt) and mid-eighteenth century the Mamluk Shâhâkh al-Balad held almost as much power internally as the Sultan had formerly. What had changed, however, was that Cairo was no longer at the head of an empire. The court of Constantinople attracted to itself the intellectual and artistic talents of the empire, talents which had formerly concentrated in and glorified Cairo. Furthermore, as Turkish supplanting Arabic as the language of intellectual culture, the Turks' political enemies were excluded more and more from the stimulation of the capital. There is no doubt that Cairo deteriorated gradually but greatly during the period between the Turkish conquest and the Napoléonic Expedition. Enduring a steady decline in population and economic viability, the city grew older and shoddier. While the built-up surface of the city neither expanded nor appreciably contracted (see Maps X and XI), over the years more and more individual houses and shops became deserted. Crumbling buildings, instead of being repaired or replaced, were left to the ravages of the elements. Top stories of dwellings tumbled one by one, leaving the lower floors still inhabited but exposing the walls of abandoned upper sections. A kind of creeping blight set in (quite different from that known in Western cities of the industrial era) which, over the years, reflected the diminution of Cairo's population.

While we lack accurate population statistics for the country as a whole, estimates based on the head tax suggest that Egypt had a population of perhaps 4 million when the Arab conquerors first arrived in the seventh century. During times of greater prosperity, when irrigation canals were well maintained and being extended, permanent cultivation covered an area of nearly 5 million or more. Such a populous country might well have supported a capital city of half a million persons, particularly when that city served not only local consumption but also a foreign-administrated foreign trade worth over 500 million or more. In the early Ottoman period there was a large Ottoman force settled in Cairo, and by the late seventeenth century, the city contained perhaps as many as 200,000 inhabitants. By 1800 the city's population had declined to about 70,000 persons, i.e., considerably less than the present population of the city of Cairo alone!

Whether the deterioration so noticeable in the city of Cairo can be blamed entirely on the "evil" administration of the Turks is sometimes claimed, is open to very serious question. First, as we have seen, the reorganization of world trade was beginning to exclude Cairo as an important commercial center even before the Turkish conquest. And second, although the Turks and their fairly autonomous Mamluk deputies can be held responsible for the neglect of public works and therefore indirectly for the population decline, they were themselves victims of a decline in vigor and prosperity which set in soon after the conquest and was certainly well established by the end of the sixteenth century. Neither Cairo, not only Egypt, but indeed the entire Turkish empire was left behind as the world moved forward. Both absolutely and in relation to the tremendous strides taken by Western Europe during the sixteenth, seventeenth, and eighteenth centuries, the Mediterranean world was dying. This was a reflection of a reflection of this more general and all-pervasive decay.

While the boundaries of the city did not change significantly during the several centuries of Turkish rule, there was a shift in the location of the urban community over the years as the center of the city continued to move westward toward the new sections. The qasbah, formerly the unrivaled site of the entire city, became somewhat less important as specialized markets on the western side of the Khālí Miṣr began to compete for business. And as an area of elite residence, the zone of Asyutāh gradually usurped prime position in the ecological hierarchy from its nearest competitor, the quarter around the Birkat al-Fil. In the opening years of the sixteenth century, the preferred residential area of the Mamluk aristocracy was in the vicinity of the Citadel, that is, the southeastern quadrant of the city beyond the walls of the al-Qāhirah nucleus; only a minor fraction of the aristocracy had built homes in the Asyutāh area which was then chiefly a zone of merchant and bourgeoisie elements. Gradually the nobility's much more secure position in the Citadel region led many of the aristocracy to remove themselves from the "line of fire," most of them preferring the greater tranquillity (and beauty) of the Birkat al-Fil which, by the late seventeenth century, contained almost half of the identifiable homes of important Mamluk lords. Deserted by its aristocratic clientele, the


"The following account is based largely upon the remarkable reconstructions of André Raymond, "Études de géographie des quartiers de résidence aristocratique au Caire au XVIIème siècle," Journal des Savants, October 1951, pp. 1-33; and "Recherches archéologiques sur les quartiers de résidences des déportés (Royai Aquatic Society, London: 1951)."

David Ayalon, in his Compendium and Persians in the Mamluk Kingdom, A Challenge to Medieval Society (Valletta, Mitchell-Lama, London: 1972), argues, however, that the reluctance of the Mamluks to adopt firearms must share with insolvency the responsibility for their eventual defeat.

Ibn Iyas, An Account of the Ottoman Conquest, pp. 56-57."

"Ibid., excerpted from pp. 110-112. Dillas added."
eritk al-Fil in 1800

southeastern extremity deteriorated, and by the end of the Turkish period it was inhabited mainly by the city's destitute, who had no other choice.

The significance of Azakhlyah and its gradual attraction over the Eritk al-Fil region did not begin much before the eighteenth century, but, once launched as an aristocratic zone, it soon surpassed all rivals. By mid-eighteenth century, the area was shared by the original bourgeois inhabitants, by lower-ranking officers, and by the newest comers, the aristocracy. This gradual transformation was sharply accelerated by a fire in 1776 which destroyed numerous merchants' residences. In the rapid rebuilding that followed the fire, many Mambocha at all levels of status took the cue from the leading Bays who hastened to reclaim the land and construct ele-

The decline in Cairo can be traced in the increasingly unenthusiastic accounts of travelers who came to the city during the Turkish regime. Domenico Trevian and his companion, Jean Themaud, were the last European visitors to describe Cairo before the Turkish conquest. From their joint account one re-

Just as growth was most vigorous on the western edge of the city, so, conversely, decay was most pronounced at the extreme eastern edge. While the area just inside the eastern wall had been declining since the desertion of the time of Maryzli, this trend became even more evident during the Turkish epoch. The very poorest quarters of the city were located in the tumbling-down eastern fringe of the city, to which undesirable village migrants gravitated. By the Turkish era also, the northern suburb of al-

The significance of Azakhlyah and its gradual attraction over the Eritk al-Fil region did not begin much before the eighteenth century, but, once launched as an aristocratic zone, it soon surpassed all rivals. By mid-eighteenth century, the area was shared by the original bourgeois inhabitants, by lower-ranking officers, and by the newest comers, the aristocracy. This gradual transformation was sharply accelerated by a fire in 1776 which destroyed numerous merchants' residences. In the rapid rebuilding that followed the fire, many Mambocha at all levels of status took the cue from the leading Bays who hastened to reclaim the land and construct elegantly.

By the time the French arrived in 1798, the district was the undisputed elite area of the city, 48 into which they moved without hesitation, Napoleon himself capturing most of the beautiful homes of them all, the one Muhammad Bay al-Afi had constructed only a year before on a site overlooking the lake.

As a result of Cairo's expansion in this direction during the eighteenth century, the extension of the city's land, and the growth of its population, the city's port area began to be more prominent. In 1770, a fire destroyed many of the houses that had been built on the banks of the Nile, and in 1798, during the stay of the French, the entire port area was razed.

While in retrospect we can reconstruct that Cairo declined precipitously after these reports were written, we cannot say that the decline began in the eighteenth century. Our only knowledge of this period comes from the works of travelers such as George Ctesias, who described the city's decline at the end of the seven

In 1798, the French army under Napoleon Bonaparte entered Cairo. The city was captured without a fight, and the French began to transform it into a capital city. They built new roads, reconstructed old ones, and created a system of canals to drain the swampy areas.

It is believed that the French writers who visited Cairo during this period described the city as it was at the end of the eighteenth century, but it is also possible that some of their descriptions were exaggerated or based on hearsay.

During the French occupation, many new buildings were constructed, including the Great Mosque, the Egyptian Museum, and the Grand Egyptian Museum. However, the city remained largely unchanged, and the old neighborhoods continued to exist.

In 1801, the French were driven out of Egypt by the British, and the city returned to its pre-French state. However, the French occupation had a lasting impact on the city, and it continued to grow and develop in the coming centuries.

The decline and fall of the Ottoman Empire in the eighteenth century had a profound effect on the city of Cairo. The decline of the Ottoman Empire led to a decrease in trade and economic activity in the city. This, in turn, led to a decrease in the city's population and a decline in its importance as a political center.

Despite this decline, Cairo continued to be an important city in the region. It remained the capital of the Ottoman Empire until 1922, and it remained the capital of Egypt until 1952. Today, Cairo is one of the largest cities in the world, and it is a major cultural and political center of the Middle East.

In conclusion, the decline and fall of the Ottoman Empire had a significant impact on the city of Cairo. The decline of the Ottoman Empire led to a decrease in trade and economic activity in the city. This, in turn, led to a decrease in the city's population and a decline in its importance as a political center. However, the city continued to be an important center of trade and culture, and it remains an important city today.
ful and high, yet the Turks make no Reparations, but suffer all to run to decay. . . . Concerning the street plan of the city, Thevetot notes that "all the streets of Cairo are very short and narrow, except the street of the Bazar and the Khalis, which is dry but three months of the year . . . there is not a fair street in all Cairo, but a great many little ones that go turning and winding." Again, it is from the account of Thevetot that we derive a picture of the changing role of Europeans in the city of Cairo. Before the days of the Turks, few foreigners lived in the city except for the Venetian merchants active at the port. Those few foreigners who passed through the city came under the exploitative supervision of specially appointed dragomen during their brief sojourn in the city. By the time of Thevetot, however, the number and variety of European residents had increased to the point where a special quarter of the city was devoted to their residence, from which even the chief official of the city was enjoined from entering without permission.49

The disappointment which European travelers universally experienced upon seeing eighteenth-century Cairo was due to something more than the relative im- provements on the continent of Europe. While this was a century of city expansion and improvement in the latter, it was also a period of accelerated decline in the

water unheeded into the streets. Sweepings, remains of food, even dead animals were thrown out of the houses; this habit assumed such proportions that some houses resorted to the institution of communal dumping places. In addition to all these unpleasant features, there were numerous vacant lots and dilapidated houses, in which the Egyptians, as a proverb states, put them to rubbish. . . . The illustrative quotation has been taken from A. E. Godkin's International History of City Development, Volume 1, Urban Development in Central Europe (The Free Press of Glencoe, New York: 1964), 173.

Driving the Europeans out of their beds was a constant occurrence of living in Cairo. One contemporary traveler, the Danish Captain, Frederick Ludvig Norden, who wrote and illustrated Travels in Egypt and Nubia, based upon his trip of 1758 to 1783, described the capital as a hell on earth. (Lokyer Davis and C. Reynolds, London: 1929.)


Decline and Fall

The years of the last quarter of the eighteenth century were thus difficult ones. The once boisterous city was in ruins; brigands ruled the roads between towers with complete impunity, exacting tribute or bezels with equal freedom from Mamluk intervention. Taxation, which had never been light, became more and more oppressive as the economic situation of the country plunged ever deeper; the Mamluks, however, were not without a certain sense of justice. They did not like to see their tax arrears, farmers desert their villages. A famine left the granaries of Bâllâeg empty, and, if this were not still insufficient, a plague imported from Constantinople added to the already inadequate flood in the same year further decimated the population. The abortive attempt of the Mamluk Lords to overthrow the Porte also drew further pain, since it was put down rather oppressively by a Turkish reoccupation of Egypt in 1776, and in 1778, when the innocent were almost as likely to be punished as the guilty.53

With such chaotic a state of local affairs, it was perhaps inevitable that the capital should decline in amenities. The unattractions of the city which Thevetot noted was even more advanced when Monsieur Volney, a French traveler, described Cairo as he saw it in 1785. He noted that its environs are full of heaps of dirt, formed by the rubbish. . . . Within the walls, the streets are winding and narrow, . . . unpaved.54 By this time the French had definitely come to dom- inate the economic life of the city successfully with the earlier arrivals, the Venetians and English, in furnishing European goods.55 However, the insecurity of the foreign traders were also increasing. Whereas in 1662 Fernand reported that European merchants constituted between 75 and 80 percent of the total number of foreign merchants, by 1778 they had declined to between 40 and 50 percent.56

The Travels of Monsieur de Thiers to Egypt, for which he added a lengthy account of Egypt which he visited in 1731 (J. Newberry and C. Micklewright, London: 1714), H. C. F. de Poczobut, P. New- brough, London: 1685-1687), particularly Part II, Book 11, Chapters 22 et seq. The quotations reproduced here have been taken from pp. 109-110.

The Travels of Monsieur de Thiers to Egypt (English trans.), Part II, Book 11, p. 256.

The Travels of Monsieur de Thiers to Egypt (English trans.), Part II, Book 11, p. 256.

It is important, in order to regain perspective, to realize that medieval cities throughout the world were characterized by those very qualities which European travelers, from the vantage point of their own cities, found so disquieting in Cairo. The following description of German cities during the Middle Ages may remind us that Cairo was far superior to the conditions from which most European cities were gradually emerging: "The visitor from the suburbs or the outer districts near the fortifications was struck, in approaching the center of the town, by the narrow and tortuous streets and lanes that were laid out without any apparent system. Regulations regarding width existed only for the principal streets. . . Most streets remained unpaved. . . in general, the streets were extremely dirty. Nobody went out without wooden-soled shoes; even the streets depicted in paintings by the earlier German masters were apt to wear some sort of protection over their shoes. . ." (William R. Klotz, The Mystery of the Saudi Arabian Desert, New York, 1972, p. 113.)
The Heritage from the Medieval City

The development of the city was marked by a number of key factors that contributed to its growth and evolution. The eastern border of the city was marked by the Walls of Babylon, which were extended to the north and south to form a double wall. These walls were reinforced with towers and gates, providing a坚固防御系统. The city was further protected by a moat filled with water, which could be raised to a height of 30 feet, and a sea wall that extended into the sea. The city was also surrounded by a series of fortifications, including the Cæsarea, which was built in the 2nd century AD and served as a defensive barrier against maritime attacks.

The city was divided into three main sections: the Cæsarea, the Cæsareopolis, and the city of Alexandria. The Cæsarea was the heart of the city, and it was surrounded by a series of forts and barracks. The Cæsareopolis was the commercial and administrative center of the city, and it was home to many of the city's largest buildings, including the Library of Alexandria and the Great Synagogue. The city of Alexandria was the residential area of the city, and it was home to many of the city's most prominent families.

The city's growth continued throughout the Middle Ages, and it became a major center of commerce and culture. During this period, the city was home to many of the most important figures in the Islamic world, including the scholars and scientists who helped to advance the fields of medicine, mathematics, and philosophy. The city was also a major center of trade, and it was home to many of the city's largest markets and bazaars.

Despite its growth and prosperity, the city was also the site of many battles and conflicts. During the Crusades, the city was captured by the Crusaders, and it was later taken by the Ottoman Turks. The city was also the site of the Battle of=axa, which took place in 1097 and resulted in the capture of the city by the Crusaders.

The city's rich history and cultural heritage continue to be celebrated today, and it is a major tourist destination. The city is home to many of the city's most important landmarks, including the Library of Alexandria, the Great Synagogue, and the Cæsarea. The city also hosts a number of cultural events, including the Alexandria Film Festival and the Alexandria International Book Fair.

In summary, the heritage from the Medieval City is a testament to the city's rich history and cultural heritage. It is a reminder of the city's past, and it is a source of inspiration for the city's future.
ssect dating back to the era of Diocletian, while another large minority were Jews. One subgroup of the population was concentrated near the shrine of the Qar al-Sham, the rest farther north in the port area. This port, through which the trade of a vast empire formerly passed, had been reduced to a mere landing for sailboats arriving from and departing to Upper Egypt. History had dealt most cruelly with this city which, some eight centuries earlier, had been described in such glowing terms by Naṣīrī Khusrū and al-Muqaddasi. The populated city, like the Delta, had edged inexorably downstream.

During the ensuing century of growth, these three communities—al-Qihārā, Būliq, and Mīṣr al-Qawwāln—served as the triangulation points of the regional pattern. Throughout the nineteenth century, expansion was almost entirely confined to filling in the connective tissue between the three nuclei. By the end of that century the city still retained its rectangular shape, but by then the rectangle stretched westward from the northern tip of al-Khansāykh to the Nile shore at Būliq, southward along the river from Būliq to Mīṣr al-Qadīm, northeastward to the Citadel, and then due north again to complete the form. It took only one century to transform these three functionally independent but physically separated communities into a contiguous whole.

Perhaps one of the most significant differences between the industrial era and those of the feudal or pre-industrial order is the critical role which sub-group identification plays in sorting and segregating the inhabitants of the latter type. In the preindustrial city, not income but "ethnic" division according to the dual criteria of religion and place of origin is the basis for social class, occupation, and place of residence within the community. The ecological organization of pre-modern Cairo conformed well to this hypothesis. The distribution of population within the city was governed by the principle of social rather than economic segregation, although economic distribution was often a function of this social identity.

What were the major groups in the city and how were they distributed? From the researchers conducted by the French scholars there emerges a fairly clear picture of the social composition of Cairo as the city neared the end of its preindustrial phase of development. Of

1. Nadir, ibid., estimated its width at 1200 meters.


HERITAGE FROM THE MEDIEVAL CITY

had originally been brought to the city as mental rather than military slaves.

Occupationally, the city was similarly divided. A computation made prior to the French Expedition, when the city had an estimated 30,000 persons, gave some labor force figures. Of the 99,000 adult males (no definition of adult given), some 12,000 were Muslims, the ethnically distinct ruling class. Of the remainder, perhaps 11 percent could be classified as middle class, being either proprietors, landlords, or international traders. Another 23 percent might be called upper-lower class, being small merchants or artisans. Well over half (51 percent) were lower-class, engaged in agriculture, unskilled labor, domestic service, etc.

There was close congruence between occupation and ethnically, with Turks and Circassians constituting the military and governing elite, with foreigners and members of religious minorities overrepresented in the trading professions, and with Africans and rural Egyptian "imports" concentrated in the lower levels of domestic service and unskilled labor. Because of this close congruence, we shall use ethnic identity as the chief criterion of ecological distribution. (It is not possible to investigate "place of origin" and its influence upon social subdivisions within the Muslim-Egyptian majority because these data have been lost. However, since this is still important in contemporary Cairo, we must assume that it was even more significant and operative at an earlier stage of the city's existence.)

Each ethnic-religious group occupied its own quarter in the preindustrial city. The largest of the former port town of al-Maṣr, was the main Coptic quarter. Most of the city's Copts lived either in this area or within the Qar al-Sham's portion of Mīṣr al-Qawwāln. It is impossible to speculate upon the precise incidence. The answer probably lies in the close connection between ethnic identity and occupational function. Among the traditional Coptic occupations were those of scribe, account-keeper, and customs official (except for those periods when the position of customs official was entrusted to Jews). One can readily see how involvement in these occupations might lead, in a city in which place of work and place of residence were intimately connected, to a concentration of Copts in port and former port areas.

Adjacent to the northern Coptic quarter were the smaller sections occupied by Christian Syrian and Ar-

30. Street in the Coptic quarter in the 19th century

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menian merchants whose wealth, great as it may have been, was still insufficient to allow them to escape the limits imposed by a deviant religion. They formed a transitional group, as well as occupied the transitional zone, between the native Copts and the primarily mercantile Europeans who inhabited the Mūsī (Frankish) quarter between the Bīlkat Aţzakhliyūn and the Chūlī Mījiy.

Thus, in 1804, the northwest corner of Cairo housed most of the “minorities” of the city, who were excluded by and in turn excluded the majority, and who were held in loose alliance by similar if rival religions.

Two of the oldest ethnic minorities, however, remained within the walled city in approximately the same locations which they had been assigned in the early plans of the city. These were the Greeks and the Jews. Hārāt Zawiyāh (later renamed, more descriptively, Hārāt al-Yahūd) remained the chief Jewish quarter up to 1962. Its location, near the Fītīmid Great Western Palace on land formerly occupied by the Gardens of Kāfir, was not an unusual one in Islamic cities. Since the Jewish community tended to grow up in the service and under the protection of the ruler, the Jewish quarter was often located within the walled city as far from the palace. Not only in Cairo, but in the Islamic cities of North Africa, such as Fez, Rabat, and Casablanca, as well as those in the Fertile Crescent, such as Damascus and Aleppo, this coincidence of location prevailed. Traditionally, also, the markets for money changing and goldsmithing were located within the Jewish quarter. The only unusual feature in the case of Cairo was the persistence of the original location, even after the religious-sacral authority had removed itself from the walled Fītīmid city to the Citadel. Instead of being relocated with it, the Jewish community remained where it had been.

The two Greek settlements had an even longer and certainly more complex history in the city. Maqrīzī’s description (see Map IX above, šāhih Nūs. 15 and 16) leaves little doubt concerning either their locations or early origins. Dating from earliest settlement was the Hārāt al-Rūm, located just northeast of the Fītīmid Eastern Palace. Some time before the eleventh century, a second Greek quarter began to develop south of Jauhar’s Bīl Zawiyah along the southern wall of the city, and thus it became necessary to distinguish between the two Greek quarters. The former became known as the “Inner Greek Quarter” (Hārāt al-Rūm al-Juwrānīyūn) while the latter was referred to as the “Outer Greek Quarter” (Hārāt al-Rūm al-Barrārīn), a distinction that soon lost its relevance when Ḍarb al-Jawārī, enlarged the walls to include the latter within the city’s circumference. By the time of Maqrīzī, Hārāt al-Rūm al-Barrārīn had become the chief quarter of Greek residence, a supremacy it still retained at the coming of the French almost four centuries later. However, by this time another colony of Greeks had begun to form nearer to the foreign and native Christian communities in the northeastern quadrant.

The remainder of the city was occupied by the Muslim community which dominated it both numerically and socially. The Mamluks were concentrated, as before, within the southern portion of the city which contained not only the Citadel but also the assembly grounds and the markets catering to the military needs of the garrison. The great mansions of the elite were located around the Bīlkat al-Fīl or on the borders of the Bīlkat Aţzakhliyūn which, together, constituted the most desirable residential zones of the city. During the time of Maqrīzī, the main Turkish quarters of the city had been in the vicinity of the Mosque of al-Azhār Mosque, primarily to the south and west of that religious center. However, with the increase in the Muslim population after Sultan’s conquest, the Turkish community spread out to encompass areas previously the exclusive domain of the Mamluk elite. Many of the Turks, however, were itinerant merchants who came and went without establishing permanent headquarters in Cairo.

Within the heart of the Fītīmid city, throughout the qaybāb and its surrounding fringes, were the Egyptian merchants, master craftsmen, journeymen, and artisans who made up the bulk of what might be termed the upper-lower class, for middle-class there was little. These were the groups upon whose life the industry of the city depended, and these were the groups most involved in the vicinal, occupational, and religious fraternities of the city. The northern and eastern fringes of the Fītīmid city had been declining in importance and prestige since before the fourteenth century, and to these sections were relegated the Muslim masses—the new migrants, the destitute, the unskilled laborers. These classes also occupied the semi-rural peripheral areas, such as al-Husnīyān, north of the wall and a squatters’ preserve on the east. Farther south, at the foot of the Citadel, was another

11 Hārāt Zawiyāh is easily located through Maqrīzī. In his time, five of the six synagogues of al-Qādir were to be found in this quarter. See Maqrīzī, Khāṣṣt (Oulīq Press: 1893), ii, 471–473. The nomenclature is somewhat confusing because the Hārāt Zawiyāh was not in the vicinity of the Bīl Zawiyah. A Jewish settlement also persisted in Miq al-Qaddūm, descendant from the prosperous Jewish community of Fustāt. It was there that the famous Geniza documents were found.

12 Clerget, among others, has pointed out that a principle which still governs the ecclesiastical structure of contemporary Cairo was operative throughout its early history, i.e., the tendency of the Christian communities to form new communities, as the older ones became overcrowded. Thus, the Christian community’s tendency to form new communities, as the older ones became overcrowded. Thus, the Christian community’s tendency to form new communities, as the older ones became overcrowded.

31. Along the qaybāb in the early 19th century

32. Along the qaybāb today: the Spice Market

33. Along the qaybāb today: clothing
uses; (10) recreational facilities, both open peripheral land and more centralized commercial recreation; and (11) cemeteries.

When one states that preindustrial Cairo had little or no segregation of these uses, the standard of comparison is the modern industrial city. Segregation, though minimal, was not entirely lacking. On the contrary, certain uses were even more rigidly segregated in eighteenth-century Cairo than would be deemed necessary or desirable in a modern city. Uses were hardly distributed at random, nor do I want to imply that there was no area specialization. Indeed, nothing could be farther from the truth. The medieval city of Cairo demonstrated concentrations and specializations which continue to influence land use patterns down to the present. By exploring some of these in greater detail it is possible to show in which ways use-segregation was present and in which ways absent in preindustrial Cairo.

Among the uses as rigidly segregated in medieval Cairo as in a modern city were the open recreational uses, the governmental administrative uses, and the cemeteries. The recreational areas, primarily those used by the Mamluks, were located outside the city in the semi-marshlands west and north of the city. Governmental offices were concentrated in the Citadel, with the notable exception of those dealing with the regulation of commerce which were located on site. (For example, the official weights and measures administration was, and still is, located within the qayyana.) Segregation of cemeteries was even more marked than in a modern Western city. While there were a few small cemeteries scattered within the city, the major installations were, and still are, located east and south of the urban complex. It is difficult to give a reader who has not seen them some idea of their extent. In 1800, for example, these two major funerary quarters occupied land equivalent to one-fourth of the area of Cairo.14

One should imagine, however, that these cemeteries were (or are) used exclusively as burial sites. Although physically segregated, they were never functionally segregated. From early times, among the shrines were found monasteries and schools for various religious and mystic orders. Some of these served as fayl hospices for itinerant scholars or travelers. In addition, guarding each family tomb was a resident retainer and his dependents. To this population must be added a few temporary and permanent squatters who found the rent-free stone and wooden structures of the "tomb city" more spacious and substantial than the mudbrick huts available to them within the city proper. With such a resident population, it was perhaps inevitable that some artisans and shopkeepers should gravitate to the area to fill the demand for daily goods.

36. Unchanged landmark: al-Ghiri aqueduct near Fum al-Khalil (ca. 1840)

37. The aqueduct today, surrounded and functionless and services. Nor were these the only functions of this unique land use. Just as the marshlands provided open recreational space for the martialic sports pursued by the Mamluks, the Cities of the Dead provided recreational facilities for the bulk of the population who required them weekly and, in even greater numbers, on the major festival occasions. While this custom originated as a means of paying respect to the tombs of saints and relatives, it attained a momentum of its own, with festivities rather than solemnity usually accompanying the exodus.

Similarly, noxious industrial uses, transportation terminals, and wholesale uses were assigned to specialized sections of the urban complex. For example, the pottery kilns, the slaughterhouses, and the tanneries were segregated near Miṣr al-Qadimah where, indeed, they still remain. Transport terminals had specialized locations, although the technology of the times required extensive

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installations only for maritime transport. Traffic to and from the city went overland on animal carriers or went by water in wind-driven craft. Terminal facilities for curios were located near the city at Birkat al-Hijaz and in Bulaq where connections could be made with the water-borne network. Storehouses, wholesale firms, and inns for itinerant traders were also to be found near the port. Within the city itself, no specialized facilities were required, since legs and donkeys were the major means of internal circulation, but combined storehouses and inns dotted the qanabah.

Commercial functions were scarcely distributed at random in the city. The pulsing heart, or rather artery, of medieval Cairo was the market zone, the linear strip of qanabah which extended from the Bib al-Futuh to beyond Bib Zuwailiyah, supplemented by horizontal out-

segregates place of residence from place of work and production from point of sale (and then squanderers time and money relinking the fragments) is the antithesis of the preindustrial city. The latter, depending upon animal

ers and energy sources and on the walking radius, combined these functions the modern city seems intent on pushing farther and farther apart. It is in this sense only that preindustrial Cairo can be little hand-laid planning and an acre-degree inconceivable to the resident of a modern industrial city, homes, workshops, and retail outlets were combined in medieval Cairo, if not within the same structure then within the same small kahrāz (quarter) or darb (alley). It was this intermix which made rigid segregation by income impossible in the city. At the time of the French Expedition, the city of Cairo was divided into 53 kahrāz, each of which in turn consisted of several darbīn (sing. darbī), i.e. perhaps 30 dwellings grouped around common access alleys which were barricaded nightly. In the more commercialized sections of the city, each darb or group of darbī was devoted to a particular craft or product. Not only were goods produced and sold there, but, in addition, residing there were some of the individuals involved in production and distribution. Hence, the same unit might contain the luxurious home of a prosperous merchant, the humble but still substantial dwelling of the master craftsman, and poorer quarters for apprentices, unskilled laborers, and menials. Within the same unit were shops and dwellings for small traders/catering to daily needs of residents, at least one coffee shop for recreation, and in the larger units a pub/a bar. There was a small mosque with an associated Arba‘īn (Koran school), possibly a meeting hall, and warehouses and inns for the convenience of visiting merchants. Even outside the commercial hub of the city similar admixtures of related functions were found.

Thus, the very principle which militated against segre-

18

18 Apparently the Islamic preindustrial city had a somewhat greater separation within domicile and place of work than did the European medieval city, a fact not unrelated to the eastern pattern of female education. Only untrained workers were free to live in the workshops: men with families often commuted (but not far) to homes in more exclusively residential zones. This was particularly true of the proprietors who could afford the added expense of the protected korān. German Martin, in his Lexikon des Caesarei and the petit mélée urban (Université Egyptienne, Cairo: 1910), p. 74, calls our attention to Nizārī Khān’s description of the eleventh century of the daily entry and egress of the merchants into and out of the qanabah, suggesting that “this custom of living outside the centers of industry and commerce was more common in Egypt than in Spain”. 19Joumali, “Description abridée des événements de la Cité”, pp. 566 et seq., enumerated the major kahrāz of the city.

23 “V. Je de Chastelain, “Evans les noirs”, noted the existence of some 1200 cafés (p. 437) and nearly 100 public baths (p. 475) in Cairo alone at the time of the French Expedition.

38. Coffee shop in the early 19th century. The function of land uses, i.e., area specialization by product, also prevented the pure operation of the principle of segregation by economic level or income. When the residential population of a suburb of the city was partially determined by its involvement in a particular industry or trade, it was impossible for individuals also to be sorted nearly according to their relative prosperity. (While this was true for those involved in artisan, craft, and commercial activities, it was less applicable to the large “army” of the unskilled and irregularly employed, often temporarily resident in the city, who tended to be segregated by income in the most deteriorated peripheral quarters east and south of the city’s core.) It was perhaps inevitable also that such an arrangement should be reflected in a unique street system. Conceiving this street system of horizontal and vertical streets meant that “the interior arrangement of the city has hardly any resemblance to European cities; not only are its streets and public squares extremely irregular, but the city is almost entirely composed, with the exception of a few very long avenues, of extremely short, broken zigzag streets with innumerable dead ends. Each of these off-shoots is closed by a door that the inhabitants open when they wish; the result is that the interior of Cairo is very difficult to know as a whole”. 20

39 Only eight avenues of any length could be found in the city. Three ran north-south, while three of the five transversals connected the all-important Citadel with points along the Nile shore. With these notable exceptions, few streets followed a simple course for more than a quarter of a mile, and most ended abruptly before they had passed by more than four or five buildings. It is to these short streets that the term darb is applied, although the concept refers more to the unit of structures than to the visual street itself. Map XI, reproduced from the plan prepared by the French Expedition, shows the course of the major thoroughfares, but also demonstrates the remarkable complexity of the smaller components of the circulation system.

How had this pattern developed? And to what type of technology was it adapted? Certainly, the original princely city of al-Qahirah was not planned in such a fashion. The relatively simple, rectangular design of the Fātimid capital contained, in addition to the main longitudinal processional-way between the two palaces, at least two other straight north-south parallels and five or possibly six east-west streets of similar directness. How had this pattern degenerated into the rabbit-warren con-

39 only saw a single configuration and, if we accept the evidence of Sjoberg, Islamic and medieval European towns were but one more stage in the growth of the modern industrial city, with its common manifestations in such diverse locations as China, India, and South America as well.

Most phenomena have both particular and universal elements in their constitution, and the street system of preindustrial Cairo exemplifies this duality. The universal, that which it shares with other cities at a similar stage of development, can best be understood in terms of technology, which determines the functions a circulation system is called upon to fulfill.

Transportation on foot (the ma’āz), on donkeys and camels (middle-class riders and bulk goods), or on horses (reserved for Mamluks), requires neither broad avenues

20 Illustrations of medieval towns may be found in Munnford, The Culture of Cities; in Arthur K. Hunt, Buildings of the Town; in Arthur G. Gallun, The Urban Pattern (D. Van Nostrand, New York: 1956), pp. 33-37; and in P. Horns, Town Building in History (G. G. Harrap, London: 1956), to mention not a few others. Among the plans of medieval European towns exists a somewhat less intricate maze of streets than preindustrial Cairo; although they lack the symmetry of either their Roman forebears or their later Renaissance reconstructions. For non-European examples, see also Sjoberg, The Preindustrial City, pp. 94-95.
nor elaborate traffic separations. Travel at such low speeds requires neither crow-light directness nor a hard, smooth pavement. Given this technological level, the circulation requirements of the community follow. Proximity for convenience takes precedence over land use segregation, with which it is in conflict. The principle of least effort, operating within the primitive transport technology of the preindustrial city, leads to roughly circular time-cost belts of access. The city attempts to minimize the need for mobility of all kinds. As against these, there are only two opposing forces to encourage the long, wide avenues: (1) the need to connect one urban community with another; and (2) the internal need to provide an impressive procession-way for an occasional display of political power. The periodic need to marshal and dispatch the army, the limited and only occasional demands can be met quite satisfactorily by a handful of such avenues. The remaining of the streets are called upon to serve merely as limited accessways rather than thoroughfares. No more than a pathway between buildings is essential for residents to reach their doors and, in medieval Cairo, no more than this minimum was usually retained. Thus, the multiple functions of the modern street are reduced, under the technological conditions of the feudal

city, to the bare minimum of access, and access on foot or animal at most. These were elements which medieval Cairo had in common with other communities of similar technical advancement. However, the three particular elements which helped shape her street pattern are in many ways more interesting, and in the final analysis, crucial. In order of increasing specificity, they are the climate, social structure, and political organization.

The direct overhead sun of Cairo, the lengthy eight-month summer, the lack of clouds or rugged terrain to cast natural shadows, all lead to a similar imperative: create artificial shade. In Islamic cities, this goal was achieved by narrow streets covered by either rush mats or wooden roofs, or protected by overhanging balconies. Placing buildings close together insulated against unwanted sunlight for all but a short period each day. The same effect was achieved by building the second stories wider than the first. This was one of the most striking architectural forms employed in preindustrial Cairo, often so extreme as to make opposing balconies almost touch. While this form also appeared in the populous districts of Tudor London and other cities of northern latitude, the impulse to open the streets, felt by most of the latter, was absent in cities of the Middle East to whose climate they were emi...
difficult to reconstruct the process whereby Cairo was allowed to develop her complex pattern. Whenever the city experienced a rapid rise in population, probably beginning from the time of the massive influx that followed the burning of Fustat, the uncontrolled growth of the native and foreign trade, and the influx of pilgrims, the government felt the need to contain the growth. The city was enclosed by walls which were periodically expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 12th century, during the Ayyubid period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 13th century, during the Mamluk period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 14th century, during the Ottoman period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 15th century, during the Mamluk period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 16th century, during the Ottoman period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 17th century, during the Mamluk period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 18th century, during the Ottoman period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 19th century, during the Ottoman period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 20th century, during the Ottoman period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 21st century, during the modern period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 22nd century, during the modern period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.

In the 23rd century, during the modern period, the walls were expanded to their present size, and the city was enclosed by a defensive wall. The walls were periodically repaired and expanded to meet the growing population. The walls were designed to control the flow of people and goods, and to prevent the spread of disease. The walls were also designed to protect the city from attack by outsiders.
farming out to administrators, while their products were exploited commercially by the urban amirs. Thus, rather than serving as a refuge from the feudal lords, the city was their chief province or domain; rather than a rival to feudal power, the city was the kingpin in the system.22

Two elements may be distilled from these brief remarks. First, if a city or a town could build up a community of close-knit, but at the same time, interrelated amirs, the city could claim political autonomy and the opportunity to develop municipal self-consciousness or a system of self-government because a foreign elite ruled without distinction both the city and the countryside. Home rule and self-government, considered to be two essential elements in modern municipal administration, were both aborted before they began. The shift during the nineteenth and early twentieth centuries to a different type of elite, composed chiefly of Europeans, tended to perpetuate rather than remedy these lacks. Second, the bourgeoisie and masses, proscribed from assuming either loyalty to or responsibility for the city as a whole, remained withdrawn in their own more primary units of identification—the religious community (subdivided in the case of Muslims into brotherhoods that at their height evidently embraced almost all urban males), the extended family, the town-origin group, the ethnic class, the occupational group, the neighborhood unit. There they remained, and in large measure still remain, cooperating, in the most interesting sense of the word, with the city. Where there was none of the "link of a center" enabling the masses to embrace a political organization.23 Little coordination was required because the elite lived in an entirely different world from the bourgeoisie and the masses, each group being independently organized for continuity and having fairly superficial and formal relations with the other. This minimal contact was channeled through a public rather than private interests failed to materialize, but that so fractionated a set of private ones ever managed to retain enough of a common bond of interest for the bare survival of the city. Part of the answer lies in the fact that very few of what we would now consider "public facilities," except for the great mosques and associated schools, were actually provided on a city-wide basis in the medieval Islamic city.24 Instead, each quarter of the city tended to provide for and look after its own. Another part of the answer lies in the peculiar system upon which the Turks, whether by design or by force, were to impose in its later years, i.e., the system of "farming." Tax farming in rural areas had been practiced for many centuries as a means whereby feudal "owners" could administer their holdings in abeyance. During Mamluk rule and even more during the Ottoman era, in Cairo this system was extended to more and more municipal services. Thus, the "farming" of the customs offices in Cairo and Bitlbi offered a lucrative opportunity to the highest bidder. What might elsewhere have been considered "public services" or governmental functions were, in this late period of Cairo's development, treated as "private enterprise"; the "entrepreneurs" paid a fixed sum to the imperial treasury for his right to perform the service and receive in return all the net profit the traffic would bear.25 Still another part of the answer lay in the paradoxical fact that coordination within this "link of a center" was so weak. That the entire system of the harkh, which grouped persons on the basis of place of residence, and the jinf (trade), which grouped persons on the basis of occupation,26 although the reader, by now, familiar with both these institutions, it must still be demonstrated how these groupings were utilized in municipal administration.

By the time the French arrived, Cairo was divided for administrative purposes into 53 harkh. Each of these was represented by a shaykh al-harkh, who was primarily responsible for the police functions in his district and who acted as an intermediary between the quarter's residents and the chief of police.27 During Mamluk times, the chief of police was actually the military governor of the city, responsible directly to the Sultan for the maintenance of order. Under the Turks, the chief of police was responsible only to the Sultan for the maintenance of order, and the latter, in turn, was theoretically superior but in actual fact accountable not only to the 24 Bays who

18 While in most preindustrial cities there was a similar wide gap between the elite and the masses, the situation in Mamluk Cairo differed in two important respects from the more typical case. First, the elite was not merely different in degree but in kind: ethnically, linguistically, religiously, and culturally. Furthermore, for hundreds of years it remained a caste rather than a class, because entry was closed to indigenous peoples. Second, whereas in most preindustrial cities the religious and secular hierarchies were intimately combined, this was only superficially true in the Mamluk case where religious offices were either subordinate to the military or exploited as "parasite" and a means of secular control.


21 In a public rather than private interests failed to materialize, but that so fractionated a set of private ones ever managed to retain enough of a common bond of interest for the bare survival of the city. Part of the answer lies in the fact that very few of what we would now consider "public facilities," except for the great mosques and associated schools, were actually provided on a city-wide basis in the medieval Islamic city. Instead, each quarter of the city tended to provide for and look after its own. Another part of the answer lies in the peculiar system upon which the Turks, whether by design or by force, were to impose in its later years, i.e., the system of "farming." Tax farming in rural areas had been practiced for many centuries as a means whereby feudal "owners" could administer their holdings in abeyance. During Mamluk rule and even more during the Ottoman era, in Cairo this system was extended to more and more municipal services. Thus, the "farming" of the customs offices in Cairo and Bitlbi offered a lucrative opportunity to the highest bidder. What might elsewhere have been considered "public services" or governmental functions were, in this late period of Cairo's development, treated as "private enterprise"; the "entrepreneurs" paid a fixed sum to the imperial treasury for his right to perform the service and receive in return all the net profit the traffic would bear. Still another part of the answer lay in the paradoxical fact that coordination within this "link of a center" was so weak. That the entire system of the harkh, which grouped persons on the basis of place of residence, and the jinf (trade), which grouped persons on the basis of occupation, although the reader, by now, familiar with both these institutions, it must still be demonstrated how these groupings were utilized in municipal administration.

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actually governed the province of Egypt (in return for a substantial tribute to Constantinople), but also to their "leader among equals," the shaykh al-balad, who was the prime power in both the nation and the city.28

From this involved structure we learn the futility of trying to separate municipal from national administration for purposes of analysis. The two were, in fact, inseparable.

The occupational organizations constituted the second administrative system within the city. While it would be beyond the scope of this study—and indeed beyond the state of our present knowledge—to detail this critical institution in all its changing complexity, some salient features that survived through the Ottoman period might be noted. First, Islamic trade organizations, unlike the guilds that developed in medieval Europe, were appropria-

ably not confined to the artisan class but embraced virtually the entire working population of the cities, whether engaged in commerce, crafts, or services—legitimate or even illegitimate. Only members of the ruling elite and the "ulama" (intelligentsia) appear to have remained outside the syndical structure. Second, at least during certain phases of its existence, the institution was en-

28The governor of the city had different titles in different places and at different times, but one recognizes a certain continuity of roles and functions though the titles changed: the qā’īd or qāib, and, in Fes at least, he was merely the overseer of the Sultans. See Le Tourneux, Les règles municipales, p. 34.

The term used during Mamluk times to designate this official was usually qā’īd, but by the Turkish era it was the term more frequently used. At that time, the qāib was assisted by the khālib al-mamalik (as he is called by V. de Châlery, "Essai sur les magistrats," p. 315), or, more commonly, the khāliba (the term will be used hereafter). In the Mamluk period, this was the chief of police.

As a most valuable source is W. G. Bowcutt, Tractate in Africa, Egypt: see especially p. 52, where he attempts to describe the governmental structure of Egypt. While his details may be of limited value, since he was writing at the final years of Mamluk control, just prior to the reorganization that followed French occupation.

Again, Mrs. Elza Feit, in her Introduction, unblurred by scholarly pretensions, adds color and insight. She notes: "Egyptian, then, is governed by twenty-four Boys, all of whom preside over the rest, but this superiority is very precarious; for he holds it no longer than 'till some of the other number thinks himself among the twenty-four Boys; and as they have here two mutinies in War, the one to fly, the other to pursue, those

in the city limited power, unless equipped to escape assassination instantly and to take to his horse or sail his vessel; while the victor takes his place. Thus do their lives pass in perpetual vigilance. The future of Egypt, tomorrow a Fugitive, and next day a Prime Again. These things are common, that nobody notices them; since they never disturb the inhabitants or com-

29 Concerning the abysmal lack of knowledge on the early corporations, Gabriel Beer has complained that "long periods of their history are still completely obscure, and only a few detailed studies have appeared on the subject. A few glimpses are gained mainly about the later periods of their development." See Gabriel Beer, Egyptian Guilds in Modern Times (The Israel Ori-

ental Society, Jerusalem 1964), my quotation from the opening page. Ignorance is compounded by controversy. Although Beer claims that the functionawak (shibboleth brotherhoods) and the professional organizations (amār) were somewhat separate institutions, the most authoritative annotated bibliography on Islamic guilds will use them interchangeably. Indeed, in some instances, to enumerate outstanding studies on the guilds and combine those with several more current ones on the functionawak. This same bibliographic deficiency, noting that "economic and social history is a particularly neglected branch of Islamic studies." See Jone Sazonoff, "The Islamic Guilds in the Time of the Mamluks: A Bibliographical Guide," on the second edition as recast by Claude Cohi (Univ. California Press, 1967). For further reading, see Louis Armand, "The Islamic Guilds in the Late Middle Ages," Pakistan has questioned the existence of guilds in Mamluk times, although he has based his position primarily on the evidence of written materials in the libraries, not on reports from informants. A single report on the guilds simply stated that they had not been found. Given the confused state of our knowledge, then, these remarks must remain tentative. Later research may require a basic rewrite up the entire subject again, while the victim takes his place. Thus do their lives pass in perpetual vigilance. The future of Egypt, tomorrow a Fugitive, and next day a Prime Again. These things are common, that nobody notices them; since they never disturb the inhabitants or com-

These basic works are in general disregard: Muntaha Fath, La révolution de l'industrie en Egypte et ses conséquences statiques au 19e siècle (1800-1900) (E. J. Brill, Leiden 1954); Nada Tomiche, "La situation des arts et petits métiers en Egypte de la fin du XVIIe siècle jusqu'au milieu du XXe siècle," Studia Islamica, xi (1960), 79-98; and G. Beer, Egyptian Guilds, cited above. My summary draws primarily on Beer, for his arguments upon the matter of guild organization in its entirety and the corporation figures given in the text appear in Muntaha, "Guilds, Islamic," Encyclopedia of the Social Sciences (1952)."n
of bishah in the towns and provinces of the Delta, while a third mukhtasib was responsible for the autonomous municipalities of the province.  

Quite clearly, however, the enormous scope of the mukhtasib’s potential functions could be somewhat more narrowly defined. Rather than total morality, his chief concern became that morality which was exercised in the economic sphere of life, i.e., the market place. (That this was not strictly correct is seen by the fact that the mukhtasib in Cairo was the overseer of the public baths, of Cairo’s, as well as of the more “normal” trades and industries.) It was he who set the “just price,” enforced accurate weights and measures, checked the scales of the “house of money,” punished the adulteration of products and otherwise controlled their quality, adjudicated in economic disputes between one trade and another, oversaw the cleanliness of the market places and even, at one time, the upkeep of the mosques, the walls, the water system, and other public facilities. In Cairo he apparently also supervised roads and construction and could even order the demolition of dangerous structures. Furthermore, he was sometimes charged with collecting the professional taxes and with encouraging the attendance at the Friday prayers of workers in the awqaf.  

In fulfilling these responsibilities he was assisted by various inspectors and by inspectors selected from among his own police agents but also, especially in later Mamluk times, through the zahrub (municipal police) under the authority of the

Governor of Cairo. During the Mamluk era, there was a marked tendency for the offices of the mukhtasib and the municipal authorities to function side by side, the city to be tightly knit, if not in the hands of the same persons, at least administratively. But by this time the office had become quite venal and was often a “tax farm” of a forced arrangement to a person lacking the prerequisite religious qualities.  

In Cairo this gradual subordination of the mukhtasib—originally a reverend “man of the pen”—to the Mamluk “men of the sword” resulted in a steady decline in the mukhtasib’s authority and the scope of his powers, in addition to a reduction in his prestige and importance. The growing size of the city, the increasing complexity of its economic operations, and the perhaps inevitable “specialization” which resulted from that growth in scale and complexity, all operated to undermine the general jurisdiction of the mukhtasib and to force him to share his prerogatives with other “economic administrators.” Additional inspection officers were added one by one, quite without logic or plan.  

This process seems to have been speeded up under Ottoman rule, as the offices of the mukhtasib as well as the other inspectors were “farmed out” to Janissaries who, in return for a fixed fee to the treasury, collected what revenues they could through licensing, fines, and bribes. By various subterfuges and under the guise of the law, the system was still relatively unscrupulous and still a major financial participant, had been divided among most of his powers and jurisdiction. He was responsible only for supervising the merchants of edible goods. Other officials, such as the shaykh of the baths (who supervised the baths, including the tentmakers and the street outcasts), the shaykh of public spectacles (who supervised a variety of public entertainments, selling those of the tin and ironmongers, the makers of sugar and sweets, tobacconists, camel sellers and saddlers, etc.) had equal if not superior status to the mukhtasib.  

This fragmentation of the mukhtasib’s coordinating role and the gradual diversion of his authority over municipal functions to the provincial offices was, in the system which was never completely filled, if the widespread deterioration of these facilities can be taken as an indirect proof of ineffectiveness. Any “farming out” of jurisdictional functions to private persons or to the deterioration of facilities, due to the tendency of “farmers” to avoid reinvestment of capital in plant and maintenance, unless specifically required by law. This ineptness to deteriorate operations unchecked under Ottoman administration. Nevertheless, the system remained nominally in existence up to the middle of the nineteenth century. It was not until the reign of Muhammad Ali that the position of mukhtasib in Cairo was abolished and his responsibilities assigned directly to the municipal police.  

Two other city-wide offices might also have filled the vacuum created by the mukhtasib’s failure, one in the “secular” hierarchy, the other in the religious, but, as we shall see, these were also victims of the general disregard of overall welfare goals. The governor of the city of Cairo was the first, the chief qadi the second. To the Western scholar bound by his ethnocentric tendency to “read” into the past and into another culture the assumptions of his own world view, the official, in obvious contrast to the Mamluk model of the governor as a whole was the Governor of Cairo. The temptation is to project upon this officer the role and functions of a municipal mayor—but no inference could be further from reality. Despite his exalted title and his apparent city-wide responsibilities, in practice this official was a military figure whose chief responsibility was that of military governor everywhere, namely to ensure discipline of the populace. He represented the coercive power of the rulers vis-à-vis the residents, rather than the executive arm of an organized community.  

There was, then, only one city-wide office which continued to exercise significant power over municipal affairs throughout Cairo’s history, and this was the office of the chief qadi, later called the mufti in Ottoman-occupied Cairo. The judicial system supervised by the chief qadi (and since the time of al-Nasir ibn Qalawun shared jointly but not equally by the heads of the four schools of Islamic jurisprudence) and administered by his district subordinates tended to overlap solely to supervising prices, weights, and measures in the food markets of Cairo. For a somewhat different evaluation of the mukhtasib of Cairo, see Cherp, Le Caire, ii, 135-138.

The place of the qadi in the administration of Islamic law has been dealt with extensively in the literature. The basic sources are to be found in works on Islamic law and jurisprudence. See also the remarks of Claude Cahlon in his


The realms of both the police power (exercised under the military governor) and the bishah (exercised by the municipal authorities) were limited and when the role of the mukhtasib was losing its authority through fragmentation and venality, the qadi seems to have become by default the only official still charged with guarding the general public weal. Under the Mamluks, his jurisdiction was an important figure in the administration of awqaf (pl. awqaf, mortmain) properties, i.e., literally all the public facilities of the city and much of its real estate.  

Ideally, then, the qadi should have been a key figure in municipal administration. Had the judiciary system been above corruption, which it notoriously was not, this municipal institution might have been able to guard the community in a way that the more specialized agencies could not. In Cairo, at least, this proved not to be the case. In actual fact, the very power vested in the judiciary made it a highly attractive office to those with financial ambitions. Since the income of the qadi amounted to some 180,000 dinars a year, adequately supplemented of course by any sums profited by the scales of justice, many individuals were willing to offer heavy bribes to gain an appointment. When the religious

Measurements, especially pp. 70-71. Concerning the specific administrative hierarchy by the end of the Turkish era, which is our chief concern in this context, see M. E. L. Massignon, Travels in Egypt, pp. 45-47. It tells us that in 1593 each of the more than 200 subscribers of Cairo had its own qadi. This system seems to have been simplified by the French soon afterward, since de Chastel, Essai sur les maours, p. 475, noted that the chief qadi had under his jurisdiction not only Cairo but the twin suburbs of Caire, Gezireh, and the two latter communities each had their own special judges, as did the major citizenships of Cairo, up to and including the chief qadi.  

Since this section was originally written, Roger Le Tourneau published a book on Fez boldly describing the municipal administration of the city. In the Fez of the sixteenth and seventeenth centuries. In his analysis he makes a number of points which parallel arguments developed here, particularly concerning the territorial dimensions of the judicial system. According to his account, in fourteenth-century Fez the chief qadi of that city had so much centralized authority over the awqaf that he was able to rule as a kind of bishop over the city. See his Fez in the Age of the Merenides, trans. Bruce A. Clemen (University of Oklahoma Press, Norman, 1950), particularly Chapter xi, pp. 35-36. This does not seem to have been equally true in medieval Cairo. For one thing, Cairo had greatly expanded in area during the fourteenth century and this might have prevented the qadi, even with more power than he in fact possessed, from planning or endangering municipal services.

74

HERITAGE FROM THE MEDIEVAL CITY

75
The Islamic city was strong, this potential threat could be repulsed, but sooner or later the institution succumbed to its own decay. The eventual sale of the position to the highest bidder could not escape notice, and thus the prestige of this religious office, which touched the life of the people perhaps more intimately than any other, was greatly reduced in their eyes by its crass exploitation.

Matters seem to have deteriorated during the centuries of Ottoman supremacy. By the end of the sixteenth century the chief qādi of Cairo had been stripped of his last residual power over the aqṣaq, this lucrative administrative being assigned to the Chief Eunuch of the Porte. Wherever parts of this control were wrested back they went to the powerful Mamshiks rather than reverting to the qādi. As the Mamshiks regained their former privileges, the qādi became more and more of a figurehead, a powerless representative of the Porte. Toward the end of the pre-modern epoch the Turks sent out a new one from Constantinople each year; his sole aim became the rapid accumulation of wealth, while the courts were administered by local civil servants.47

Thus we have the second historical heritage from the medieval Ottoman city—if not municipal anarchy at least a low level of corporate coordination. There was no single administrative structure which combined police power, judicial power, and the jurisdiction into a municipal government, and thus these three elements tended to remain fragmented and uncoordinated in Cairo. Even if there had existed a concept of the public good, public property could hardly have been executed through the diffuse system of municipal administration which sufficed only for the "do-nothing" approach of the medieval city. To build an administrative system was necessary, and welfare and planning responsibilities remained a task for the distant future.

The Islamic city, however, was not entirely devoid of public facilities. True, Cairo had no public water system—water being provided by numerous vendors who carried Nile water in goats skins throughout the quarters. True, Ottoman Cairo had no municipal street cleaning and waste disposal system. Private enterprise again partially met this need by carling for, a price, the refuse which was then dumped at the edge of the city, forming the high mounds on which every visitor of the Turkish period remarked. However, mosques and related schools, baths, public drinking fountains, roads, bridges, hospitals, orphanages, almshouses, and many other amenities did exist in the city. While a few of these had been left by the Umayyad and the Abbasid caliphs, the majority had been constructed and maintained through the contribution of the institution of the aqṣaq, i.e., properties of sultans, princes, and lesser notables, usually in the form of donations. The aqṣaq were administered by religious foundations; the profits of which were devoted to providing many of the facilities which in a contemporary city are considered to be within the public domain. Whether municipal government continued to grow because its functions were being performed by the aqṣaq, or whether the aqṣaq were stimulated to expand because of the vacuum left by the absence of municipal government will forever remain unknown. But it must be noted that the two were, in a way, mutually exclusive substitutes. Even before Islam, land in Greek and Byzantine cities was often bequeathed to religious organizations super- vised by the church hierarchy, the proceeds of which were marked for charitable purposes. While this procedure does not seem to have been a part of original Islam, it was quickly incorporated into the religion within a century of the Prophet's death as a means of fulfilling one of the basic pillars of Islam, the giving of alms.48 As originally conceived, waqf was the land and buildings owned by mosques and other religious founda- tions, usually granted by the sovereign. In much the same way that European monarchies supported their activities by their land holdings, the mosques and shrines were maintained from the proceeds of their possessions. In time, these original holdings were augmented by the bequests of private individuals who willed their property to religious organizations and a large number of other people. From a position over and above those needed to maintain the fruitful- ness of the lands and/or buildings would be devoted to specific charitable purposes, generally spelled out in great detail in the administrative statutes. Or, in other words, the welfare and planning responsibilities remained a task for the distant future.

Quite early in Egypt the supervision of all properties so bequeathed was vested in the chief qādi who, in turn, appointed administrators (called mutasawwif and nāṣir) who received a small stipend for their services. The tradition was natural, however, that, given the reciprocal relationship between sacred and secular power that seemed to characterize the division of labor in Mamluk Egypt, with the decline in the qādi's importance came his divestment of real control over waqf administration and the assign-
and buildings was in the hands of a religious foundation. Management services were performed by an administrator who, if he were one of the beneficiaries of the property, tended to withdraw maximum returns from the property without transmitting all the profits to the beneficiaries. In either case, the administrator was tempted to milk the property. The original requirement, that maintenance and reinvestment take priority over the distribution of profits, was virtually impossible to enforce. Therefore, "dead hand" ownership could not be depended upon to supply the reinvestment necessary for property upkeep or improvement.

Nor could the tenant be expected to provide what the owner did not. Originally waqf property could be rented only for one to three years at a time. Any improvements the tenant added to his leased premises became part of the original waqf. Here certainly was no incentive for investment! It was not until the sixteenth century that, in an effort to arouse the interest of tenants in the maintenance and improvement of waqf property, it became possible to obtain a lease in perpetuity. Since these leases could be bought and sold, this reform tended in practice to return dead land to the market place where it was once again sensitive to economic incentives for development and change.

We have noted above some of the factors that encouraged the creation of waqf and some of the unanticipated failures of this system, but we can have no idea of how pervasive this institution was without recourse to some actual statistics on land and property ownership in Egypt. Maqrizi tells us that in 1393 some 130,000 feddans (a feddan is approximately an acre) of land were held in public waqf, the proceeds of which were to be used for the upkeep of mosques and other religious institutions. These were directly supervised by the Sultan's personal secretary (the da'wādīr al-Sultan). In addition, there were the town lands in Miṣr and al-Qahirah, the proceeds from which were devoted to the upkeep of Mecca and Madinah as well as for charitable purposes within the city itself. These were controlled by the qaḍī and supervised by special dinawīs in each section of the city. Finally, there were the innumerable family endowments. Combined, they accounted for the overwhelming majority of the real estate of Miṣr and al-Qahirah. Maqrizi, even then, noted with alarm the corruption and mismanagement which led to a deterioration in all forms of waqf property. Even as late as the early twelfth century in Egypt, despite confiscations of unclearly titled agricultural lands by Muhammad 'Alī, about one-twelfth of the cultivable land of Egypt was held as waqf, and much of the property in the older portion of Cairo (untouched by Muhammad 'Alī's reforms) came under the administration of the Ministry of Waqf.

What were the implications of this inheritance from the medieval period, whereby a large proportion of all real property in Cairo was either government-owned or held by religious foundations of various kinds? The major unanticipated consequence has already been indicated: the accelerated rate of property depreciation which, despite reforms, persisted in causing blight in the city. Every visitor to Cairo during the late medieval period commented on the large sections of that community which showed signs of former dense occupancy but which were by then relatively deserted, the tumble-down structures being occupied by occasional squatters. It will be recalled that this was particularly true in the northeastern section just within the walls, although the phenomenon was by no means confined to that section. We are now in a better position to understand this condition and must ascribe a major responsibility for it to the institution of waqf.

Let us take an hypothetical example to trace the operation of the process. A tenement dwelling was made into waqf, either public or family. A tenant or group of tenants leased and occupied the building, but neither "owner," administrator, nor tenant felt responsible for the condition of the structure. Finally, the building, typically constructed of unstable mudbrick (the universal Egyptian building material), was unable to withstand further abuse and toppled. The tenant was free to move elsewhere. The administrator of the property had of course failed to set aside a sum for depreciation and could not be expected to supply out of his own pocket the money necessary to restore the value of the property. It was simpler for him to seek a new sinecure. In times of prosperity, when demand for city land was high and the population expanding, this land might revert to private ownership (since its value had increased) and be redeveloped. However, in times of depression or a static or declining population base, the property might simply remain deserted until a squatter established his rights by moving into the debris.

Thus a system which could, with later reforms, cope with the problem of urban renewal during prosperous days, was totally incapable of sustaining property conditions during eras of contraction, i.e., during the Turkish era. The institution of waqf, which had begun so auspiciously and which promised so reliable a means for supporting municipal facilities and services, had deteriorated by the late medieval and Turkish periods into a self-defeating institution which merely accelerated the deterioration of the city.

These, then, were the three chief handicaps of the political order which Cairo, about to enter the modern era, inherited together with its physical geography and social organization. The discrete and alien elite was to remain with her far into the modern era. While the composition of the elite changed periodically, it remained through the twentieth century a pressing problem which prevented the emergence of a broad-based and responsible form of municipal government. It served to fragment the city and the society and to act as a focus of hostility for growing nationalist sentiments. Anarchy in municipal administration, another heritage, was attacked earliest and most successfully. And yet, even in this area, despite an increasing indignation of the process of administration, home rule proved virtually unobtainable. It was not until 1949 that the government of Cairo was truly separated from national administration, and even today, it lacks many of the attributes and powers normally considered part of "home rule."

The diffuse control of lands officially part of the waqf of Cairo, the widespread corruption and inadequate regulation of the activities of waqf administrators, and the disastrous effects such a system had on the maintenance of urban property were early recognized as evils needing correction. Reforms, however, came late and gradually. Attempts were made to deal, piecemeal, with specific abuses and inefficiencies, but it was not until the middle of the nineteenth century that a more concerted approach was attempted. And not until the complete abolition of the waqf irtifā' under a central ministry by the revolutionary reforms of 1915 was a true solution found to the problem that had plagued Cairo's development throughout the medieval period.

Each of these developments will be considered in greater detail in the discussion of modern Cairo, a city that came into being after 1798.
PART II. THE MODERN ERA:
A TALE OF TWO CITIES
Cleansing the Augean Stables
1800-1848

While it is conventional for historians to date Egypt's entry into the modern era from the French Expedition or a few years later at the accession of Muhammad Ali, neither is strictly correct. In reality, the discontinuity between a medieval past and a modern future had already begun before the appearance of French soldiers, and the movement toward "modernization" or "Westernization" was not truly under way until the reigns of Muhammad Ali's successors during the second half of the century.

This was particularly true in the case of Cairo which changed little in tangible attributes during the first half of the nineteenth century. Modern Cairo is only one hundred years old and came into being after the death of Muhammad Ali. The outlines of Cairo and her two port suburbs were roughly the same in 1838 as they had been in 1798. Nor had the population experienced an appreciable net change during those fifty years. But

1 Gibb and Bowen have suitably recognized that "many of the tendencies and factors . . . in Mohamed Ali's administration of Egypt-what economic exploitation, the military reorganization, the introduction of European technical experts, the attempt to shake off Ottoman suzerainty and to extend Egyptian control over the neighboring provinces—are already visible in Egypt and Syria during the last decades of the eighteenth century." See Islamic Society and the West, Volume 1, Part 1 (Oxford University Press, London: 1990), p. 232.

2 With respect to Cairo, Muhammad Ali's grandson, the Khedive Ismail (1863-1879), must be credited with transforming the city.

3 Compare Map XI showing Cairo in 1798 with Map XII of the city in 1838, below.

4 This cannot be ascertained exactly because few demographic records were kept during this period. However, if one accepts the French estimate of between 350,000 and 365,000 persons for Cairo alone in 1798, and if one accepts the figures variously presented from Muhammad Ali's census of 1826 of between 253,000 and 257,000 for the city, one must conclude that, whatever the fluctuations in the interim, the net change was minimal. The figure of 253,000 is given by Edward Lane in Appendix F of the third edition of his Manners and Customs (1. M. Dent and Co., London: 1908), p. 354, and is identified as having been taken from the census of 1827-1828. Lane believed the figure to be an underestimate. The official report of the Misr al-Khubz al-Fahmi, which was published in the Egyptian Ministry of the Interior, Bureau of Statistics, Ezit de statistique générale de l'Egypte, années 1853, 1854 (sic), 1855, 1856, 1877 (Imprimerie de l'Etat-Major Général Égyptien, Cairo: 1879), p. 7, where the population of Cairo is given as 256,599, and that of the entire country as 4,623,246. Fluctuations in the intervening years appear to have been rather extreme. During the earliest period of Muhammad Ali's reign, the general insecurity undeniably depressed the urban population of the country. Félix Mengin, in his Histoire de l'Egypte sous le gouvernement de Mohamed-ali (A. Bertrand, Paris: 1873), estimated the population of Cairo alone (excluding Mīr al-Qā‰ifā‰ and Hīlīn) in 1833 at about 200,000. It probably remained fairly constant until about 1870, when increased stability and a flight from the farms pushed the population up. In the first edition of Edward Lane, An Account of the Manners and Customs of the Modern Egyptians, Written in Egypt During the Years 1832-34, and 35, partly from notes made . . . in the years 1825, 26, 27, and 28 (Charles Knight and Co., London: 1845), p. 26, the author states that by about 1834 the population had risen to 240,000 for Cairo alone, but that this increase had taken place within only the preceding few years. In 1875, however, Cairo suffered from a severe plague (the last catastrophic one), which, according to official estimates, reduced her population by at least a third. This is noted by Lane in a footnote to his manuscript added p. 36 between 1835 when the manuscript was completed and 1876 when it went to press. Again, massive migration from the rural areas seems to have restored this loss shortly, although it is unlikely that the population ever reached the optimistic figure suggested by Chatelain in 1840. See Chatelain, Histoire des Égyptes (Paris, Masson et Cie, Paris: 1859), 1, 204, where he estimates the number of houses in Cairo at 32,000 and then, using the assumption of an average occupancy of 10 persons per dwelling, reaches a total population for Cairo of 300,000. It is generally acknowledged that Chatelain's work heavily glibly the city, being more of a propagandist to his patron, Muhammad Ali, than an objective or cautious evaluation. Given a government preoccupied with inflating the population, it is logical to see this optimism incorporated into Chatelain's estimate.

How are we to weigh these various attempts to establish Cairo's population? Logic points to the approximate figures of about 350,000 as an upper limit and 200,000 as a minimum during periods of population decrease. A substantial growth of Cairo's population would have been unlikely during the reign of Muhammad Ali, since, at least during the first half of his rule, the total population of the country did decline, a fact that has not been deemed as much as Cairo's population figure. Some population estimates are given in A. E. Cussack, "A Century of Economic Development, 1837-1937" in L'Egypte Contemporaine (February-March 1939), pp. 133-155.
by the rebellious townsfolk in the 1800s uprising. After the French withdrew, occupants of the various durāb, bābā, and other castles had no time in reconstructing their gates. European visitors in the early nineteenth century remarked on their ubiquity and, as late as the 1890s, they were still occasionally occasioned.48

Again, during a minor plague which made its unwelcome appearance during the French occupation, burials within the built-up section of Cairo were prohibited. From this many have assumed that intramural interments remained punishable in Cairo. And yet we later learn that the interior cemeteries at Azhibkiah and Mamlukīrah were still being used for burials at least as late as 1825. It was only when Muhammad 'Ali acquired land in preparation for his planned boulevard connecting Azhibkiah with the Citadel that these cemeteries were closed, the area razed, and the bones removed to exterior cemeteries.

Thus, of the direct reforms introduced to Cairo by the French, few had any permanent effect, apart from suggesting procedures which were later followed. The most important effect—albeit unintended—of the French campaign was that it brought to Egypt's still the founder of the hereditary line which was to govern Egypt during a critical phase of her modernization, from 1805 until the Revolution of 1952. Cairo's development during the nineteenth century was incomparable from that dynasty and, in particular, its two major figures: Muhammad 'Ali (1805-1848), the founder; and Ismail (1848-1879), the builder or the profligate, depending upon one's prejudices.

Just as Salih al-Din had been brought to Egypt, almost by chance, by the Syrian force which expelled the crusading forces, so Muhammad 'Ali had come, equally capriciously, as lieutenant commander of a small corps of Albanians in the Turkish army which helped repel the French.49 In both instances, Cairo's development was

48 As early as 1814 their large number is noted. See Henry Layard, Nineveh and its Remains, 1850; Mariette, Egitto e Faraoni, 1862; and Caymus in the Year 1824 (Rudolph and Martin, London: 1825). They are also described by a visitor a few years later. See Edward de Montfaucon, Travels in Egypt During 1818 and 1819 (Volume 2 of the New Voyages and Travels series) (Phillips and Co., London: 1823), p. 9. As late as 1875, John Wilkinson, in A Hand-Book for Travellers in Egypt (Murray, London: Revised edn. of 1857), mentions these gates in every part of the city except the new.

49 For the French order prohibiting intramural interments, see Mubarak, Al-Khitāb, 1, 61, and Claudet, Le Caire, 9. However, in his discussion of the history of the Muhammad 'Ali Boulevard (now Sharī' al-Qādīrah), Mubarak noted that the Azhibkiah and Mamlukīrah cemeteries were still used for burial until the terminal of the boulevard and beyond.

50 For an account of Muhammad 'Ali's life and activities, based on archival research, see Henry Dodwell, The Founder of Modern

Cleansing the Augean Stables

developed, so to speak, by military chance. Of the leaders, however, Salih al-Din arrived at the more profound conclusion. Whereas he inherited a city on the verge of becoming a world metropolis, Muhammad 'Ali inherited an unattractive and smelly provincial capital. The interregnum years following Ottoman reoccupation of the city were dark ones. Neswof, who had been pillaged by the French soldiers, were victimized doubly when at the mercy of the undisciplined and ravenous factions of the Turkish army. Anarchy was everywhere present in the cities, with villages depopulated by bedouins and Mamluks alike. This anarchy seems to have extended to the very gates of Cairo, since at one point bedouins even controlled the mile-long road between Būqīq and the city. Several years of struggle over booty and power in Cairo had made the Albanians a leading faction. By then, Muhammad 'Ali's astuteness (and the death of his competitor) catapulted him to the head of this unruly but powerful group. Finally, the Pasha, to restore order and placate the Cairo, recognized the de facto control of the Albanians by appointing Muhammad 'Ali as Pasha. But it was a pitiful price. Muhammad 'Ali had been elevated to the Pasha of a country but had become thereby the reluctant heir to its host of woes. The problems were both political and personal. The country itself was divided, with the Mamluks in control of Upper Egypt and the Albanians in Lower Egypt. Even within Cairo there was a precarious balance and the threat of renewed Mamluk strength. Law and order, never secure, had become virtually nonexistent during the decades of shifting elite power. While the countrywide state breakdown was evident in the frequent raids on settled communities and the total disruption of lines of communication between cities, Within Cairo to venture out at night was to invite danger. To become accepted custom for Jamisharis and Mamluks, then French, and finally the Albanian successors, to help themselves openly from the shops of Cairo, sometimes even repaying an accommodating merchant with a insulting belittlement. Given this situation, it was hardly surprising that Muhammad 'Ali's first efforts should have been directed toward the consolidation of his position in Cairo and the unification of the remains of the country under one rule. The first decade or more of his reign was devoted almost exclusively to this difficult but essential task.

The physical and economic problems of the country and were not less pressing, but they could be approached only after political stability had been achieved. Three centuries of neglect had led to the gradual sifting

up of the canal system, so essential for irrigating agricultural lands. In the process, at least one-third of the land had gone out of cultivation. To restore the productivity of the land, it was first necessary to clean, excavate, and extend the irrigation canals.

The physical neglect of the countryside was more than matched by the physical deterioration of the capital city. For three centuries she had been falling imperceptibly into ruin. House after house in the older quarters had crumbled and been neither cleared nor rebuilt. For centuries rubbish had been disposed of in the most primitive manner: it had been dumped into the Kulli (since dry for all but a few months during high flood) or thrown over the city walls. This process had turned the once-cherishing canal into a fetid stream or, during the dry season, into an off-laid-laden off to eat and nose. This process had also resulted in the accretion of an almost continuous band of high mounds which virtually surrounded the city on all sides, betraying flies, rats, and disease. Interspersed among these unnatural hills, particularly on the western extremity, were lowlands, swamps, and periodic ponds which harbored the mosquitoes and other insects whose contribution to Cairo’s recurring epidemics still went unrecognized. Until these areas could be cleared and leveled, there was no real hope of tackling the serious health problems of the city or of making room for future expansion.

43. A mustabah of the early 19th century

The situation on the periphery, however, was no worse than that in the city’s center. Within the city, street con- fusion had degenerated to an art form. Nor were especially unpaved, unswept, and unwashed (even during Maqriz’s time water had been sprinkled on the streets to keep down the dust), but they were also becoming increasingly impassable. Many structures had ground-floor appendages which jutted out into the roads below. In addition, each tiny cubicale of a shop had its own massive stone bench (mustabah) extending out into the roadway in front, on which customers and tradesmen sat to talk and smoke, and where the proprietor performed his ritual prayers. So congested were the streets and alleys that often only one donkey could proceed down them at a time, and a loaded camel had to choose its route with care. The houses were as undeveloped as the public ways, and the mosques and other public facilities—the ablitz (drinking fountains), baths, and schools—had virtually deteriorated. Water reservoirs had for too long been diverted into the pockets of their administrators. Industry and trade, the economic bases of the city for more than six centuries, had stagnated and declined; they were ill-adapted, in addition, to the needs of a modern age. Trade with Europe was minimal and a knowledge of Western technological advances utterly lacking.

This was hardly an enviable heritage for the ambitious founder of a modern state. The stable was filthy; no new growth could take place until the Herculean task of cleaning had been carried out. It was to Muhammad ‘Ali that this task fell.

There is no need to describe here the vast program of reform—some wise, some foolish, most uncoordinated—instituted by the Albanian ruler, but a few might be mentioned because, for several decades, they took priority over improvements in Cairo. First came the consolidation of power, culminating in the destruction of the Mamluks who, after six centuries, were finally divested of their power. Then came a confiscation of illegally constituted agricultural saqaf lands and eventually a monopolization of all cultivable land. To bring this process to a stop, and all agricultural land was made a government monopoly. The urban saqaf, however, was left untouched by Muhammad ‘Ali’s confiscations, thus perpetuating the problems of urban renewal caused by this institution. Recent studies dealing with agricultural reforms include Helen Riviña, The Agricultural Policy of Muhammad ‘Ali in Egypt (Harvard University Press, Cambridge: 1961) and Gabriel Born, A History of Landownership in Modern Egypt, 1800-1930 (Oxford University Press, London: 1960), the latter touching only lightly on this early phase. See C. Atiya, Agenzia generale dei Bagni, il 195- 196, on the status of urban property.

14 In 1812, six hundred chief Mamluks were invited to participate in the procession organized to celebrate the appointment of Muhammad ‘Ali’s young son, Tūsīn, as head of the army being sent against the Wahhābis in Arabia. As the procession filed slowly out of the Citadel, the Mamluks were set upon at the upper and lower gates of the narrow passageway and, by prearranged plan, slaughtered by Muhammad ‘Ali’s soldiers. Those still remaining in Upper Egypt were relentlessly pursued until the surviving remnant took refuge in Epiroos. Many of the royal land in Egypt had been granted not as freesthold property but as military estates. Gradually, however, these had been converted (with the authorities looking the other way) to private property and later farmed out as joint tenancies.

15 In 1868 Muhammad ‘Ali ordered a clearing of tule and added to the crown lands all properties of dubious title. By 1884 productivity—and later to devote some of it to the new crop, long staple cotton, that was to play so vital a role in the recolonization of Egypt—virtually the entire irrigation system of the Egyptian Delta had to be rebuilt.

Thousands of villagers were conscripted to perform this back-breaking work, and between 1874 and 1880 hundreds of canals were made functional. Not the least important of the canals constructed was the Mahimīyah navigation canal, which permitted waterborne traffic to ply between Alexandría and Būlqā with only one break-in-built span. Much of the work was done by French experts and the sending of educational missions to France by the Pasha tended to establish Paris as the first model of “Western” ways. When, almost two decades after Muhammad ‘Ali’s death, his grandson Ismail sent for one of the chief landscape architects of Paris to help redesign the city of Cairo, la Haussmann, he was not so much innovating as he was carrying to its logical conclusion a pattern that had been established during the early decades of the century.

16 It is therefore ironic that Muhammad ‘Ali, famed for his imaginative and dynamic reforms, noted for his ambitious and visionary innovations, should go down in the history of Cairo in the rather prosaic role of housekeeper. Cairo and its problems never seemed to have more than momentarily captured his imagina-

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system from time immemorial. Muhammad 'Ali supplemented this system by assigning his Albanians, and later joint military and civilian patrols, to make nightly rounds throughout the city to protect the populace. In addition, all pedestrians were required by law to carry their own lanterns after dark to light the streets and facilitate the work of the patrols. Police posts were established in all quarters of the city. The uniformed police were assisted by a roving contingent of plain-clothes police (perhaps identified by a small badge, although reports vary) who were posted during the daytime throughout the markets, coffee houses, and other public places to help keep the peace.18

Until about 1830 the police chief of a district was held by the governor (walī) and the qādī jointly, but shortly thereafter authority was concentrated in the qādī alone who, from his central office in the Frankish quarter, dispensed summary justice wherever possible. Relying on the more difficult and serious cases to the Pasha's court at the Citadel, where they were usually handled by Muhammad 'Ali's deputy. After this, the office of wali became less and less important and was eventually reduced to a merely honorific position. The role of the qādī, once a principal municipal officer in the Middle Ages, had also been reduced by this time to an absolute minimum. He was appointed for a year's term from Constantinople and, since the price of his office was high, had to recoup his investment in haste. Having neither continuity in office nor sufficient familiarity with the language, laws, or customs of the people, he could scarcely perform his essential role of adjudicating lawsuits, settling inheritances and other family disputes. In effect, the office was administered by his local and permanent assistant.18

In addition to these changes in affairs of justice, a number of other administrative reforms were made early in Muhammad 'Ali's rule to facilitate more efficient management of the city and country.19 But, as in the past, the administration of Cairo was not really separate from the administration of Egypt. Both came directly under the authority of the Pasha, now assisted by the various councils and ministries he established and by numerous staff officers to whom he delegated limited authority. Although Cairo was given, together with Rosetta and Damietta, the special status of muhāfazah (governorate) and was therefore administratively independent of the provincial chiefs, it was still a long way from home rule. She has enjoyed this status of governorate ever since, although only recently has it meant any degree of autonomy.

As noted earlier, the few physical changes in Cairo which were made during this early period were each more by-products of other ends than outgrowths of direct concern with the city. Like 'Alī ibn al-Dīn before him,

18 See the treatment of these matters in the cited works of Lane, Cloley, and Wilkinson (1857 edn.)
19 These are discussed by Dodwell, The Founder of Modern Egypt, pp. 102-103; Lane, Manners and Customs (3rd edn.), pp. 113-115; and Cloley, Appearings in Egypt, 11, 141-142.
Muhammad 'Ali tended to ignore the existing metropolitan and establish himself beyond its confines. One of his very first construction projects was a palace for himself in the retreat of Shubra, several miles north of the city near the banks of the Nile. Begun in 1808, this European-designed palace and its extensive formal gardens were completed a year after. Later, a wide avenue flanked by fast-growing acacias and flowering trees was laid out to connect the palace with the northern tip of Ashkaliyeh. Although a half century later this road was destined to serve as an upper-class carriage promenade, at the time it was constructed its only function was to access the palace—the same water when the older city was chocking for lack of major thoroughfares. Present-day Cairo, however, must acknowledge with gratitude the somewhat accidental "planning" of Muhammad 'Ali, since Shkit Shubra, as this road is still called, remains the major access route to the heavily populated districts of Shubra and Rawi' al-Faraj, twentieth-century additions to the metropolis.

As Salah al-Din had done, Muhammad 'Ali turned his attention to the Citadel, which again became the site of intensive construction. Large sections were ruthlessly cleared of older monuments to make room first for Muhammad 'Ali's new palace and later for his mosque, whose dome and twin minarets still dominate the skyline of Cairo. Walls and fortifications were reconstructed in the European manner and, when an explosion of a powder magazine destroyed a large segment of the old walls in 1824, they were promptly replaced by ones of Western design.

Other royal palaces were scattered throughout the environs of the city. The western edge of Ashkaliyeh and to a lesser extent the open area to its south, Biliq, and the land intervening between the port and Shubra were preferred sites. Although none of these palaces seems to have been located with any idea of determining or influencing future urban development, each later constituted a nucleus for a future residential zone of Cairo.

Only in the development of Biliq does there seem to have been any conscious plan. Every previous ruler of Cairo had his own favorite section which therefore tended to absorb a disproportionate share of urban growth. Salah al-Din had the Citadel which pulled the city southward; Baybars had preferred the Husayniah section which stretched the city northward; al-Nasir ibn Qalawun had favored the western bank of the Khaliati which led to that area's growth. Muhammad 'Ali's clear preference was for the extreme northwest corner of the city, demonstrated by his palace at Shubra and even more by his policies in Biliq, which was transformed during his era.

In 1824 Biliq still bore the marks of French destruction; two years later recovery was underway, aided by the presence of the Pasha's naval arsenal and docks, received a trade of and a small construction boom. Within the environs of Biliq lived a small group of European merchants, mostly engaged in the slave trade. These old houses were built by merchants, some of them . . . some of them . . . large . . . it contains the naval arsenal and dockyards of the Port of Biliq, and the new vessels built in the shipyards there. The continued decay in al-Qahira is described by Count de Forbin, who visited Egypt in 1817-1818. See his Travels in Egypt, Being a Description of the Tour in the Holy Land, p. 329 (2nd edn., London: 1839). The continuation in al-Qahira is described by Count de Forbin, who visited Egypt in 1817-1818. See his Travels in Egypt, Being a Description of the Tour in the Holy Land, p. 329 (2nd edn., London: 1839).

Muhammad 'Ali's encouragement of industry can be found in Close, Appendix, general sur l'Egypte, p. 222 and p. 287-297 in Clere, Le Caire, p. 190-191; and in the Master Plan of Cairo (Government Printing Office, Cairo: 1960), pp. 50-54, 63.

On the intervening land between Biliq and Shubra, Muhammad 'Ali encouraged the elite to build palaces and summer residences in addition to their homes in the city. This had already begun to occur by about 1820, since St. John passed a number of new dwellings on his way into the city in 1823, and the trend was well advanced by the early 1840s as attested by others. From its inception, Biliq had labored under a conflict between two incompatible land uses. One impulse had been the international port functions, which were made by making the area a center of commerce, manufacture, and transport. The other had been to take advantage of its riverine location and the fresh northerly breezes and keep Biliq

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due decade Biliq became the site for many of the new industrial establishments set up by Muhammad 'Ali as part of his plan to modernize the economy. In 1828 a wool factory was established in Biliq, and other textile factories for cotton, linen, and lighter weight cloths followed. By 1830 Biliq proudly contained the first iron foundry of Egypt. That year also marked the laying of the foundation stone for the National Press, in operation by 1832. To this nucleus were added improved naval installations and enlarged facilities for riverboat construction. Spinning mills went up in Sahabiyah on the northern fringes of Biliq, and still further north, between Biliq and Shubra, an enormous bleaching plant was built to service the various textile factories. Biliq was, in addition, a favored location for Muhammad 'Ali's new schools. As early as 1821 a civil engineering school specializing in roads and bridges was opened in Biliq. By 1833 this school had been transferred to the palace of Isma'il (a deceased son of Muhammad 'Ali) in that quarter and, in 1834, finally expanded into a full-fledged Polytechnic Institute. Other schools were opened in Shubra for agriculture and veterinary medicine.

51 The capital itself, which had been sorely neglected during the first part of Muhammad 'Ali's rule, became the site of considerable effort during the terminal phase. Beginning in earnest in the 1830s, one after another of the city's sanitary and aesthetic efforts was attacked with vigor. One of the very first reforms instituted aimed at cleaning the streets of the city which for generations had been known as the "dirtiest in the world," a sad distinction. A contemporary observer wrote in amazement: I have not been many days in Cairo, and yet I discover that many changes have taken place in its appearance ever since the descriptions of the very latest travelers were written. The streets, formerly disgustingly filthy, are now remarkable for their cleanliness, being all swept three times a day. We are currently working on improving the quality and accuracy of our text-to-speech models. If you have any questions or need assistance, please feel free to let us know. We are here to help!
The transfer of Muhammad 'Ali's medical school to the latter in 1836-37 and the opening of an 800-bed military hospital there contributed further to the growth of the city. In 1836-37, the city and its environs involved the rubbish mounds which had grown to impressive heights on the northern and western perimeters of the city. These were to be leveled and the rubbish used to help fill the swamps and several marshy ponds in their vicinity. This work seems to have been well under way by the early 1830s, particularly in the southwestern section between the city and the Nile. Again, this was primarily the work of Muhammad 'Ali's adopted son, Ibrahim. In the area now known as al-Insha and Daw awin, Ibrahim planned a plantation and, on the site of present Garden City, a palace. To prepare these areas, the mounds had first to be leveled, trees planted, and roads constructed. These improvements had already been made by the time Ibrahim constructed his new palace compound (with white exteriors and a magnificent, ivory-glazed, glass window) north of the preexisting Qasr al-Ayn in 1839.

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Clearing the August Stables

1847-1848: The Finishing Touches

In the late 1870s a number of superficial changes were introduced which, nevertheless, began to alter dramatically the appearance of Cairo. The domestic architecture of that city, which had evolved little during the centuries of Turkish rule, slowly yielded to Western influence. The first signs of dissatisfaction with Cairo's appearance are hinted at in the late 1870s. When Ibrahim returned victorious from his Syrian campaign, many of the houses in the city were whitewashed and decorated in his honor. Evidently this so pleased him that a few years later an order was issued making it mandatory for every household to whitewash the exterior of his building. This practice persisted despite the horrific gases of Westerners—until well past mid-century, although the buildings of older Cairo have long since reverted to their original dons and mud hues.

Cleager, Le Caire, 1, 287, gives the earlier date but his chronology in this section seems generally untrustworthy, and he gives no sources for this allegation. Lane, writing the first version of his Manners and Customs of the Modern Egyptians, in 1839, refers to the project of Azbakli and mentions nothing of a program to drain it. Had it been drained in 1837, certainly he would have noted this spectacular change before his first and only visit to the canal area. As a matter of fact, he prepared for his sister's (Sophia Poole) book. In 1838-39, Azbakli is still described as wet by one source. See Egypt: Fano, J. "Edward Lane: A Life In Egypt." Lecture given (William Smith, London: 1853), p. 43. It is questionable whether this secondary source should be given credence, however. Observations varied during different seasons of the year. St. John, arriving toward the end of the flood season, reported partial flooding in Azbakli, with other sections given to open crops. See Egypt and modern changes in the area, see Wilkinson, Modern Egypt and Thébais (1843), p. 199.

For use on this new canal, see Wilkinson, A Handbook for Travellers in Egypt (1827 edn.), p. 146. The Khaliq Miṣr was then used only to supply water to the city itself. At one
Other changes in architectural values were also becoming evident. It was within the next decade that the order was issued making it illegal to enhance new buildings with mashrabiyah, those delicately turned wooden lattice windows which for centuries had graced even the dullest and least attractive buildings. While the rationale for the ruling was that they constituted a potential fire hazard, one must look deeper to recognize this also perhaps as a rejection of traditional values. In place of the Arabian and Manilhak styles, a mixed southern European and Turkish style, later not in the best of taste, was gaining ascendance. One of the first examples of this "new" style was the palace of Siiram II in Bitlis (which later housed the Polytechnic Institute), built in a "strange mixture of Italian, Greek and Arabian styles." In this and other

houses for nobles which were constructed in the early 1850s, the arched structures of the Oriental genre had been replaced by stark rectangular windows copied from Europe, always covered by iron grillwork, they were sometimes also equipped with glass panes—a style that became increasingly common as the decade advanced. By 1860 the trend was that to fill many of the "early modern" sections of Cairo with architectural monstrosities and melanges seems to have been well established—and irreversible.

It is perhaps strange that only at the very end of the century until the very last years of the decade. Thus, Lane in the first edition of Mannees and Customs (1836) does not consider them significant enough to mention. By 1843, however, they had evidently grown in importance, and in his third edition Lane has added a note to the effect that "windows with European tassels of glass, each with a shade of trellis-work outside the glass, almost universally, have lately become common in new houses, in many parts of Cairo. They are mostly built in the Turkish style, more or less approaching to European fashions: not well adapted to a hot climate ... ." See Lane, Manners and Customs (3rd edn., 1843), p. 8. Ciesiak, writing in 1833, is harsh indeed in his evaluation of the "new" architecture. He states: "In the last few years, the styles of construction (Arab) have been considerably modified. The Constantinople style, a bastard genre, mixing with the very worst taste a degenerate Greek style with the Arab, has been adopted. Many wooden buildings have been constructed according to this system, in which the arched windows have been replaced by rectangular ones and in which arabesque reliefs have been sacrificed to mere uniform surfaces" (my translation).

CLEANSING THE AUGUST STABLES

resulted from the fact that the city contained hardly any streets broad enough to accommodate one, much less two passing carriages. But even the royal coach could not proceed down the few thoroughfares of the city without colliding with flimsy appendages or being halted altogether by a more recalcitrant projection into the street. It is on these streets—and these streets only—that Muhammad 'Ali reclaimed the public way from the private usurpations made during centuries of lassies lair.

In the opening years of the fourth decade, masbāb and other projections still impeded traffic with impunity. Streets were becoming cleaner but were still dusty, unwatered and, of course, unpaved. Above the bazaars, tattered awnings still gave way occasionally, depositing accumulated dirt on the heads of unsuspecting passers-by. Shops were unpainted, cluttered, and unrepaird. Most of these abuses had received some attention but results were spotty and imperfect. A new concerted effort was made in the opening years of the 1860s to end them once and for all. Masbāb on the major streets were summarily ordered removed, and only later were a few in the wider portions of the thoroughfares allowed to be rebuilt. An order was also issued in 1860 to require replacement of the flimsy tarp coverings with more substantial wooden planks, although this order seems, in the main, to have been ignored. Also resumed was the earlier practice of sprinkling the unpaved streets to help settle the dust.

Commentable as they were, these piecemeal efforts failed to provide a basic solution to the growing problem

of horse Services.

the purpose of furnishing squares and gardens; menhrehiyahs are forbidden and mashrabiyahs are to be removed." Quoted from page 154. That such an order was enforced is attested by Wilkinson's 1847 edition of his A Handbook for Travellers in Egypt, where, on page 159, he states that "all ... houses of Cairo have been lately whitewashed by order of the Pasha."

M. Bekescs, Sources and Impressions, p. 174. There is no doubt that the term "new" for later additions, Multazim, el-Khitaib, s. v., acknowledges that Muhammad 'Ali was the first to introduce "Western" architecture to the city. It will be recalled that St. John observed several of these new buildings just north of Azabkhah as early as 1835. However, they seem not to have become very

51. Mashrabiyah work on old house near el-Aswar Mosque

52. Windows and balustrades of a house in Bitlis

The modern reader can but wish that Miss Martinetti could see the present traffic congestion of Cairo.

52. Lane, in the text of his first edition (1836) of Manners and Customs, takes cognizance of the ubiquitous masbāb and the tattered condition of the street awnings. In portions of his book printed during the 1850s these problems are described. See the 1856 edition, Volume I, p. 16. In a note added between the first writing and the book's publication, Lane informs us that Muhammad 'Ali "has lately caused the masbāb to be more built in most thoroughfare streets to be pulled down, and only allowed them to be rebuilt in the wider parts, generally to the width of about two spans. At the same time, he has obliged the tradesmen to paint their houses, and to replace the roughly tacked-on covers of Superior well-mannered of Cairo's old world market areas. Hours sprinkling of the streets is first noted in Egypt: Familiar Description, p. 41.

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of circulation and, by 1845, Muhammad 'Ali was ready with a more direct approach. A tangle (plan) for the city was drawn up, providing for a number of new or enlarged streets. Among these was a design to widen and extend the latitudinal thoroughfare through the Frankish quarter (Shāri‘ al-Mūsīkī and its eastern extension, originally named al-Sikkh al-fudhulh or Rue Neure, now called Shāri‘ Jawhar al-Qadis). Also proposed was a much more ambitious new diagonal to be cut like a surgical incision through the densely packed residential quarters between Azbikāyah and the Citadel (Boulevard Muhammad `Ali, now more descriptively named Shāri‘ al-Qāfah, or the Street of the Citadel). Neither of these ambitious conceived arteries was destined for completion during his lifetime.

The need for Shāri‘ al-Mūsīkī was related to recent changes in the status of foreigners. From its tiny original nucleus, the Frankish quarter expanded during the reign of Muhammad `Ali in encomarshal the alleys and byways on both sides of the Mūsīkī. European merchants, encouraged by the Pasha's protection and a burgeoning taste among the elite for goods of Western manufacture, migrated to the capital to open shops along the Mūsīkī."

54. Shāri‘ al-Mūsīkī today, relatively unchanged. Although this street had been regularized by Napoleon, it was still too narrow to accommodate the cart traffic generated by a thriving trade. To answer the vociferous complaints of the foreign merchants, Muhammad `Ali condemned and then purchased all land and buildings in the path of a broad (almost eight meters) thoroughfare. Demolition began in 1840 when the partial plows abutting the street were rented to private investors. Progress was evidently slow—to which Muhammad `Ali's declining health may have contributed—for at the accession of `Abbās in 1840 only a small portion of the street had been completed. The Mūsīkī itself was widened, but the extension of the path into the Jewish quarter east of the Khalīj had barely begun. By 1848 the road had inched its way to the Maydān Qasrār al-Mūsīkī where it ended in a confusing maze. It remained for Muhammad `Ali's successors to complete its route to the edge of the eastern desert.

The second road presented even greater obstacles, involving as it did a longer distance and a more congested path and having perhaps a somewhat less compelling rationale. It was desired chiefly to facilitate the ruler's access between his palaces at Azbikāyah and the Cīnīl. Nevertheless, 1845 marked the beginning of land acquisition for the Boulevard Muhammad `Ali. The two cemeteries blocking the westernmost segment of the road were razed, houses were purchased, and some demolition of most of the shops are constructed and fitted up as in Europe, with glass fronts, and stocked with almost all the luxuries of western countries; these are operated by Franks and Greeks."

55. For information on the former road, see Murakbih, Al-Khīlah, m. 82-95. Details on the latter diagonal to the Citadel are given in the same volume, pp. 65-68.

56. Lane, Cairo Fifty Years Ago, pp. 122-123, describes the eastern cemetery. The modern city served by a tentative system of roads, although not yet hard-surfaced.

Several miles to the south and still separated from the main complex by rubble and swamp land was the small independent suburb of Mīyār al-Qadīrah. While she had lost much population, even since the time of the French, she had established her future character as host to the less attractive industries of the city and to a reviving Christian community. East of the town were the al-khārāb covering the still unexcavated remains of Fustāṭ, and beyond them, the Khallūlah cemeteries. Out into the Nile and across the river on the western bank were other small settlements—each more forlorn than the last. Half of the once-populated island of Rawdah was occupied by a botanical forest laid out in the 1830s for Ibrāhīm Pasha by a Scotch horticulturist, while the remainder was but sparsely and spottily occupied. The three islands strung out in a row opposite Būlāq (which had been mapped by the French and were referred to collectively as Jarāt al-Būlāq) had finally coalesced into a single larger one. While this island was destined to become one of the prime residential quarters of twentieth-century Cairo, Zomālik, it was then still subject to periodic flooding and inaccessible except by boat. It remained deserted except for the selām-frequented retreat which Muhammad `Ali had constructed there in 1830. On the western bank of the Nile, stretching from north to south, were the small villages of Imbīlāh (where Napoleon had won his decisive victory over the Mamluks), Būlāq al-Dakūrī, Dāqqu and, farther south, the ancient town of Jīlah, which had declined from the luxurious summer resort favored by the Mamlūk lords to a handful of houses, a mosque, and a pottery works. Throughout the environs, there was room for potential growth. The city, however, had not yet expanded to encompass the preexisting settlements. The era of building had to await a population explosion and a technological revolution—both of which began during the second half of the nineteenth century but were not fully underway until the twentieth. The work of Muhammad `Ali had been to clear the preindustrial city of its encroachments; the modern city came into being in the age that followed, but it would not have taken the form it did without the preparatory efforts of Egypt's first "modern" ruler.
of circulation and, by 1825, Muhammad 'Ali was ready with a more direct approach. A ta'ḏlim (plan) for the city was drawn up, providing for a number of new or enlarged streets.43 Among these was a design to widen and extend the latitudinal thoroughfare through the Frankish quarter (Shir'ī-al-Mūsī and its eastern extension, originally named al-Sihhah al-Jallūsh or Rue Neuve, now called Şairî Jawhar al-Qāʿīd). Al also proposed a much more ambitious new diagonal to be cut like a surgical incision through the densely packed residential quarters between Ashbakliyah and the Citadel (Boulevard Muhammad 'Ali, now more descriptively named Şairî al-Qaʿād, or the Street of the Citadel). Neither of these ambitious conceived arteries was destined for comple tion during his lifetime.

The need for Şairî al-Mūsī was related to recent changes in the status of foreigners. From its tiny original nucleus, the Frankish quarter expanded during the reign of Muhammad 'Ali to encompass the alleys and byways on both sides of the Mūsī. European merchants, encouraged by the Pasha's protection and a burgeoning taste among the elite for goods of Western manufacture, migrated to the capital to open shops along the Mūsī.44

43 Amira Sini, in Taqwil al-Nil [Almanac of the Nile] (Cairo: 1919), in 57-58, notes that by 1847 there existed a maktūs taqwil al-mādīrīs (council of taqwil) of Cairo which recommended that many of the streets be given names, that houses be numbered, and that street signs be installed. These suggestions do not seem to have been followed very enthusiasticly, if at all.

44 Lane, in Cairo Fifty Years Ago, p. 79, described the Mūsī: "In this, as well as in some of the neighboring streets,

begun. But no construction was ever undertaken and the project remained abandoned until 'Ummatul gathered it anew and carried it to completion a generation later.45 Despite these few attempts to open the circulation system within the city and to extend its lines of communication outward, at midcentury Cairo still remained an insulated and inward-looking community. Throughout the suburb's hinterland were villages and small towns that were destined to become an integral part of the city during the next century but, as yet, these remained unconnected with the capital and led independent existences. One might mark their presence, however, since they will figure in our later discussions of Cairo in the modern era.

Making a full circuit of the city, one notes to the east the high mounds (the so-called windmill hills) which still separated the medieval walled core from the Mamluk tomb city in the desert beyond. Few persons then lived in the cemetery area, except in the vicinity of the mausoleum of Qayt Bay.46 Northeast of the city were a few scattered villages, Marītāsh, Helepolos, and Dimārdis, whose inhabitants were engaged in agrarian pursuits. Agriculture also predominated due north of the city walls, with the inlying villages of Mahmūdshah and Jaz zar al-Badrān and the more peripheral ones of Shubrah and Minyāt al-Saharan surrounded by fields. In the northwest corner was the expanding but still ecologically discrete town of Būlāq, already taking on an industrial character.

Southward, along the eastern shore of the Nile, all mounds had been cleared; in their place stood scattered palaces amid rich plantations but, as yet, no urban forms. Already existing were the Qaṣr al-Dubbihār, a palace built originally by Muhammad 'Ali's son-in-law and later occupied by the Pasha's Harīm, which gives its name to the madīnah near which the American Embassy now stands; the Qaṣr al-AYn, an early palace around which the present medical complex of public hospital and medical school grew and evolved; another palace, al-Qaṣr al-Burj, built by Irshād Pasha in the zone known today as Garden City, near his extensive plantations on the linear strip destined to become the government ministry zone of a later era. This entire eastern area was already served by a tentative system of roadways, although not yet hard-surfaced.

Several miles to the south and still separated from the main complex by rubble and swamp land was the small independent suburb of Mirr al-Qaṣfūnah. While she had lost much population, even since the time of the French,47 she had established her future character as host to the less attractive industries of the city and to a reviving Christian community. East of the town were the Khālīfah covering the still uncrowded remains of Fustāh; and beyond them, the Khālīfah cemeteries.

Out into the Nile and across the river on the western bank were other small settlements—each more forlorn than the last. Half of the once-populated island of Rawdah was occupied by a botanical forest laid out in the 1830's for Irshād Pasha by a Scotch horticulturist, while the remainder was but sparsely and spottily occupied. The three islands strung out in a row opposite Būlāq (which had been mapped by the French and were referred to collectively as Jazīrat al-Būlāq) had finally coalesced into a single larger one. While this island was destined to become one of the prime residential quarters of twentieth-century Cairo, Zamālīl, it was then still subject to periodic flooding and inaccessible except by boat. It remained deserted except for the selān- frequented retreat which Muhammad 'Ali had constructed there in 1830. On the western bank of the Nile, stretching from north to south, were the small villages of Imbūsīkh (where Napoleon had won his decisive victory over the Mamluks), Būlāq al-Dakrīr, Deqqaq, and, farthest south, the ancient town of Jīnah, which had declined from the luxurious summer resort favored by the Mamluk lords to a handful of houses, a mosque, and a pottery works.

Throughout the environs, then, there was room for potential growth. The city, however, had not yet expanded to encompass the preexisting settlements. The era of building had to await a population explosion and a technological revolution—both of which began during the second half of the nineteenth century but were not fully underway until the twentieth. The work of Muhammad 'Ali had been to clear the preindustrial city of her encumbrances; the modern city came into being in the age that followed, but it would not have taken the form it did without the preparatory efforts of Egypt's first "modern" ruler.
The Origins of Modern Cairo

A perceptive visitor to Cairo just after the turn of the twentieth century noted that "European Cairo . . . is divided from Egyptian Cairo by the long street that goes from the railway station past the big hotels to Abdin [palace] . . . And it is full of big shops and great homes and fine carriages and well-dressed people, as might be a western city . . . The real Cairo is to the east of this . . . and is practically what it always was." The insulation between the two Cairos was so absolute that an English visitor in 1899 could remark with manless condescension that " . . . with the polo, the balls, the races, and the riding, Cairo begins to impress itself upon you as an English town in which any quantity of novel oriental sights are kept for the aesthetic satisfaction of the inhabitants, much as the possession of a country place keeps a game preserve or deer park for his own amusement."

Thus, by the end of the nineteenth century Cairo consisted of two distinct physical communities, divided one from the other by barriers much broader than the single street that marked their borders. The discontinuity between Egypt's past and future, which appeared as a small crack in the early nineteenth century, had widened into a gaping fissure by the end of that century. The city's physical duality was but a manifestation of the cultural cleavage.

To the Cairo of 1850, the native city, still essentially preindustrial in technology, social structure, and way of life; to the west lay the "colonial" city with its steam-pow- ered terraces, its faster pace and wheeled traffic, and its European identification. To the east lay the labyrinthine street pattern of yet unpaved hārār and durāh, although by then the gates had been dismantled and two new thoroughfares pierced the shade; to the west were broad straight streets of macadam flanked by wide walkways and sewers, militantly crossing one another at rigid right angles or converging here and there in a rond-point or madīnā. The quarters of the eastern city were still dependent upon itinerant water peddlers, although residents in the western city had their water de-

ivered through a convenient network of conduits connected with the steam pumping station near the river. Eastern quarters were plump and dense with vertical danger, while gaslights illuminated the thoroughfares of the west. Neither parks nor street trees relieved the sand and mud toxics of the medieval city; yet the city to the west was elaborately adorned with French formal gardens, strips of decorative flower beds, or artificially shaped trees. One entered the old city by caravan and traveled on foot or animal-back; one entered the new by railroad and proceeded via horse-drawn victoria. In short, on all critical points the two cities, despite their physical contiguity, were miles apart socially and cen-
turies apart technologically.

The history of the second half of the nineteenth cen-
tury is essentially the history of the new western city. At the end of Muhammad 'Ali's rule in 1848, Cairo was still a single city with somewhat fewer than 300,000 in-
habitants, including her port suburbs of Bīlāq and Mīr al-Qalībān. By 1857, Cairo was composed of two symbiotic communities whose combined population ap-
proached 90,000. In 1847 the number of European foreigners in Cairo was still insignificant, comprising chiefly the old and expanding Greek community to which had been added a small number of Italian and French "adventurers." By 1857, Cairo's European popu-
lation exceeded 30,000. Numbers, however, tell but part of the story. In 1847 Egypt was still a semi-autonomous member of the Ottoman empire, ruled in Eastern fashion by an Easterner. Westerners were still barely suffered, despite the handful of trusted advisers retained by the Pasha. By 1857, although still nominally within the Ottoman fold, Egypt had been governed by a representa-
tive of the British government for some fifteen years. European nationals monopolized the important govern-
ment posts and enjoyed privileges, exemptions, and a style of life that made them the envy not only of Egypti-
ans but also of the officials of the Ottoman empire. The history of Europe and Egypt were first becoming acquainted.

In the early 1850s not a single steamship plied regularly between Alexandria and European ports. By the end of that decade there were "eigh teen regular opportunities to go for every month from Alexandria." See: Egypt: Familiar Description of the Land, People and History (William Smith, London: 1850), p. 294.

4 A popular biography of Muhammad 'Ali's adopted son, Britanī, is Gabriel Eskinazi, Ibrahim Pasha, 1820-1848 (Im-
primere Française, Cairo: 1908). For the succession of Britanī, see Henry Dodwell, The Founder of Modern Egypt: A Study of Muham-
mad 'Ali (Cambridge University Press, Cambridge: 1931), p. 361. There is a difference of opinion concerning the death by poison. A medical report gave natural causes, the generally accepted opinion at the time was that he had been murdered by his guards. Various contemporary versions are given in Conversations and Journals in Egypt and Middle East by the Late Nasim Williams Senior, based on his trip of 1895, edited by M. Simpson (Sampson Low, London: 1892).

The first transportation links were being forged, and trade had barely begun. By 1857 the destinies of Egypt and Europe had become interwoven.

The years fifty were critical ones. They witnessed not only an agricultural and demographic revolution within the country but also the transformation of Egypt's status in the world. While they also witnessed an expan-
sion of the city of Cairo, a phenomenon that had not occurred since the fourteenth-century reign of Sultan al-Nāṣir ibn Qalawīn. During that earlier period Cairo had in a brief span, doubled in width, incorporating the parallel arāb al-ajlāfāt as far as the Khāliṣ Mīrāj which had hitherto marked its western boundary. During the latter half of the nineteenth century Cairo again widened to encompass a third band beyond the western limit of the city, edging toward but not quite reaching the river's bank. This new strip included portions that had been developed in the fourteenth century but which had long since been abandoned.

The reigns of Muhammad 'Ali's first three successors contributed little to city development, although they were marked by events that exerted important if indi-
rect influences on the city's future. By 1873 Muhammad 'Ali's advanced age and declining mental powers left the administration of the country, in the bands of Britanī, a de facto situation finally recognized late in 1848 when the latter was raised to the rank of bey of Miṣr and Karādisheh, the Pasha of Britanī, who by the end of that year Britanī had predeceased his father and the succession fell to Muhammad 'Ali's nephew, 'Abdī I, Pasha until his death in 1854. It is difficult to believe that any ruler could have been so completely unattactive as 'Abdī Pasha is pictured, for one searches in vain in Western literature for a sympa-
thetic word or a redeeming virtue. While it is true that many of 'Abdī's contributions were, from a European point of view, negative, two of his policies did leave permanent marks on the city. The first was the com-

struction of a railroad between Alexandria and Cairo; the second was his founding of a small military city in the desert outpost of 'Abdīlīyah, now a well-populated quarter in northeast Cairo that bears the name of its founder.

Even before his accession, 'Abdī had been approached by the British who solicited his support for their scheme to connect Alexandria and Suez by rail. The suggestion was hardly novel. Indeed, for as long as the French had pressed for a seawall canal through the Isthmus of Suez, the British had been advancing the rail alternative to carry mail and passengers between Europe and India without jeopardizing Britain's sea-freight monopoly around the Cape of Good Hope. At one time the British had come close to success, when Muhammad 'Ali agreed in 1834 to the plans of an English engineer to build what would have been one of the first railroads in the world, had the scheme been carried out. But bungling on the British side, coupled with the inopportune death of the engineer, Galloway, aborted the plan, and when Muham-
mad 'Ali was approached again in 1842 he was no longer amenable.

'Abdī was scarcely more enthusiastic but, for reasons of his own, finally succumbed to the pressure and signed the railway agreement in the summer of 1851. In the hope of minimizing foreign control he specified that only Egyptian capital and labor were to be used; and to ensure that the work would not act as an incentive to British investment, the quarantine line should not be a direct connection between Alexan-
dria and Suez but rather should be built in two seg-

ments, the first from Alexandria to Cairo, the second between Cairo and Suez. This dream project was abandoned in 1854, but the Cairo leg was completed in 1854, just prior to 'Abdī's death, and the railroad was officially opened to traffic at the end of the following year. The second part, between Cairo and Suez, was opened in 1858 but proved so poorly designed that it was abandoned ten years later.

Although Britain thus failed to achieve her objective, Cairo was left the unintended beneficiary. The trip be-

ten Alexandria and Cairo, which had formerly taken four days reduced to two or three hours. The success of Cairo to the world and of the world to Cairo was thus drastically altered. During the age of Muhammad 'Ali, Cairo had been relatively isolated and inward-looking.

4 A rather complete analysis of the British role in Egyptian canal policy is contained in Charles Hulseberg, The Suez Canal: Its History and Diplomatic Importance (Columbia University Press, New York: 1933). For information on the early railway, see especially pp. 268-274.

5 Mougeot believed the concession to the British was granted in return for a "bride" which was none less than influen-
tial British support of Egyptian autonomy vis-à-vis the Porte, a not unlikely explanation. See Conversations and Journals . . . by Nasim Williams Senior, p. 28.
ing; with the advent of the railroad she began to look—and then to stretch—outward.

The terminus of the new railway was constructed on the site of the former Fātimid port of al-Maqū, more recently marked by the westernmost bastion of Salih al-Dīn's wall, the Bīb al-Ḥadīd. Although this historic gateway had been demolished by Muhammad 'Ali only a few years earlier in 1841, the station took its name from the former landmark. The location of the terminal at Bīb al-Ḥadīd, then the outer limit of the city, determined the ecological future of the surrounding land. Not only did its presence stimulate development, but around this "port of entry" assembled many of the later immigrants (both European and native) to the city. In the old Coptic quarter between it and the Aqṣābīyān grew up a zone of marginal uses, including roaming houses, coffee shops, and later, the prostitution district of the city.

In the northeast quadrant of the contemporary city, surrounded by middle-class areas, is a small slovenly pocket known today as 'Aḥsā'īyat Bahārīyah. Its isolated position cannot be understood unless one knows that its development began in 1849, whereas the surrounding sections remained unsettled until the twentieth century. This was the area contributed by 'Abbās, Muhammad 'Ali had rid himself early of the troublesome Albanian mercenaries, by means of whom he had gained power, and had substituted a conscript army of Egyptian fullbacks. 'Abbās reverted to imported troops but, perhaps remembering their undisciplined nature, decided to station them outside the city. In 1849 he had built for them a series of barracks on the desert edge along the route to the outlying villages of Maqāriyya and Heliopolis. Soon a complement of businesses and dwellings began to grow up around this core. To encourage their development, 'Abbās gave free land to those wishing to build, and houses for tradesmen and officers went up rapidly. A hospital, a school, and a palace for the Pasha added further vigor to the section whose population was swelled by that of the neighboring village of al-Wāṣīli, settled by a beduin tribe (the Bani-Wāṣīli). In short, a sort of royal suburb—that recurring phenomenon of Cairo's history—began to take shape.

It is difficult to predict what might have been the pattern of Cairo had 'Abbās lived long enough to put his

town" on a firmer footing. But his unexpected death only five years later condemned the settlement to stagnation. His successor sent the mercenaries packing, stationed his new troops in barracks on the shore of the Nile, and 'Abbāsīyat was abandoned as abruptly as it had been founded. Only fifteen years later the area was described as a "pitiful memorial ... a place for swine" (which in a few years... will be an unprofitable mass of ruin). This prediction proved overly pessimistic, for 'Abbāsīyat remained a somewhat forlorn outpost until infused by British troops after 1883. It was finally incorporated into the city during the first decade of the twentieth century when a great speculative boom swept urban forms about it like a flood.

The creation of one of Cairo's most famous landmarks, Shepherd's Hotel, also dates from the era of 'Abbās, and therefore cannot be left out of any discussion of contemporary developments. Samuel Shephard, who had gone to sea to escape the drudgery of apprenticeship to a pastry cook, landed somewhat fortuitously in Egypt in 1842, having been put ashore there in consequence of a minor mutiny. After some years as assistant and then manager in several small British hotels in the Frankish quarter, his opportunity came through a meeting with 'Abbās over their shared interest in hunting. This initial contact was exploited until, as Samuel Shephard wrote to his brother in November 1849, the Pasha "has given me a grant of a large college to build an Hotel on the site. I am now busy making a plan." The site granted to the hotelkeeper was none other than the Palace of Alī Bay, overlooking the Aqṣābīyān, which had been requisitioned by Napoleon during the French occupation and later, during the educational exasperation of Muhammad 'Ali, had housed his famous School of Languages, 'Abbās, having little use for such fripperies, had closed the school, thus making it available for the hotel that was to attain such real and symbolic fame.

These seem to have been the sum total of 'Abbās's contributions to the city, true he had considered water...
distribution (mostly for his ard 'Abdillah) but, in fairly typical fashion, abandoned the plan upon seeing the first cost estimates. Nor did he neglect entirely the project begun under Muhammad 'Ali to extend Shifāh Misr into the heart of the old city, but progress was so delayed that, by 1854, the Rue Neuve extended only up to the Bazaar of the Brassworkers, Sīq al-Nahḍān.⁴⁴ There were no doubt the death of 'Abbās and the appointment of Muhammad 'Ali's youngest son, Muhammad Sa'id, as his successor, but perhaps none was as jubilant as Ferdinand de Lesseps, the "father" of the Suez Canal. Sa'id's education had been entrusted to French savants and among his instructors had been the son of the French Consul in Cairo, young de Lesseps. Upon Sa'id's accession, de Lesseps wrote his congratulations and in turn received an invitation to visit Egypt, a bid he accepted with alacrity and not with empty hands. With him he brought fairly detailed plans for the projected canal, elaborations of those first proposed in 1854 and refined further by the Société d'Étude du Canal de Suez, organized by Enfantin in 1856.⁴⁵ De Lesseps reached Alexandria on the seventh of November and by the last day of that month had Sa'id's signature on the canal concession.⁴⁶ All that remained was to obtain the Sultan's ratification of the agreement—a simple matter which, in fact, required almost a dozen years to negotiate. British opposition, through the usual influence which Lord Canning exercised in the Con- 


⁴⁴ Mubārak, Al-Khitāt, ii, 53. This was still less than half the distance to the eastern port, Qāhirah.

⁴⁵ Bteineh, L'Égypte de 1798 à 1900, p. 158, gives the early history.


⁴⁷ Al-Khitāt al-Tawfiqīyyah, i, 95.

⁴⁸ This palace is now occupied by the Tawfiqīyyah Secondary School. See Faraj, Al-Qāhirah, ii, 379.

⁴⁹ Mubārak, Al-Khitāt, i, 89. One should not overemphasize the "pulling power" of the railroad, however, since this area still remains one of the least developed sections of Cairo.

⁵⁰ The Civil War which cut off supplies of American cotton turned a heavy demand for the Egyptian subsistence whose price crippled and then quadrupled on the international market. In 1861 Egypt exported less than 100,000 quintals of cotton, selling at an average of 14.75 piastres per quintal. By 1865 the quantity exported had more than doubled, and the average price had come down to 8.17 piastres, an increase of over two and a half million quintals at a strikingly high price. But, with the end of the war and the rapid recovery of the lost markets, demand for Egyptian cotton fell off. By 1869 the price of Egyptian cotton declined to only half of what it had been the preceding year. See Georges Douin, Histoire du règne du Khālid Ismā'īl, les premières années du règne, 1839-1867, Tome i (Paris: Imprimerie nationale, 1852), p. 100. The list, compiled on the basis of theulletin socio-économique of the Cairo University for the year 1933, is given in p. 379.

⁵¹ At the end of Ismā'īl's reign the population of Egypt was probably in excess of 7.5 million. Two generations earlier at the time of Muhammad 'Ali's accession the population had been estimated (variously) at between 2 and 3 million, a figure which did not begin to mount until about 1840.

⁵² The claim that Ismā'īl's irresponsible borrowing and excessive spending were the major reasons for Western intervention in the affairs of Egypt is one-sided if not false. Perhaps the foremost appraisal of Ismā'īl's is given by George Young, in Egypt (Charles Scribner's Sons, New York, 1932), who points out that the making of Egyptian loans for the Suez Canal, from which it could not profit, and the unscrupulousness of both foreign contractors and financiers must share this responsibility.
marks the establishment of both the Cairo Water Company and the Cairo Gas Company. In February the company of M. Charles Lebon, already engaged in supplying the city of Alexandria, was granted the concession to provide gas to Cairo and the suburbs of Būllāq and Misr al-Qadimah. The following year government land in Būllāq was donated to the company for its plant and, in April of 1869, the train station at Būllāq al-Hadidi was symbolically lit to celebrate the inauguration of this service. Gradually, Azbakiyyah and its vicinity, the new quarter of Ismā‘īlīyah, the major thoroughfares, and the Khedive’s palaces were brought into the network which eventually extended into parts of the older city as well.

The work of the water company proceeded less efficiently. In May of 1869 the concession to provide Cairo and her suburbs with municipal water was granted to M. Cordier, who had successfully provided water to forty French towns and was engaged in a similar operation for Alexandria. Late in the year a joint stock company was formed to raise capital for the venture. The city donated land near the Qasr al-Ayni at the mouth of the Kāhlī for the major pumping station and, by the summer of 1869, the first conduit (to the Citdel and thence to ‘Abbāsiah) was laid. But financial and/or engineering inefficiencies aroused the ire of both shareholders and Ismā‘īl Pasha, and Cordier was finally discharged. The company was then reorganized and its deadline extended until 1873. The line was reduced to a site near the Ismā‘īlīyah Canal and conduits were laid to serve Azbakiyyah and Ismā‘īlīyah. Only gradually and incompletely were these extended to other parts of the city.

Thus by 1870 Cairo was physically prepared to enter a new era of city building. An event of that year provided a model for the new city and stimulated the motivation for it: the Exposition Universelle held in Paris in the spring of 1867. The exposition was Baron Haussmann's pièce de résistance, the climax of his career which was fated to end in calamity and rejection only two years later. By then, Haussmann had been Président de la Seine for more than a decade and a half, during which he had transformed the Ile de la Cité, planned the peripheral zones, and resolutely imposed formal parks and broad boulevards on the antiquated street plan in a manner so associated with his name that even today this method of planning is referred to as “Haussmanning.” Municipal utilities had been installed on a grand scale, including the famous sewers of Paris through which visitors to the Exposition were conducted with pride.

The Universal Exposition was designed to display Paris’ accomplishments to the world. Even the site of the exhibit, the Champ de Mars, was redesigned for the event in the same grand style. The impact of the Paris Exposition Universelle on European city planning of the nineteenth century was as significant as it was unquantifiable. It set the style and served as the model for numerous countries for decades to come, just as the Chicago World’s Fair of 1893, with its return to the classic mode, set the style for the “city beautiful” movement which dominated American city planning for decades. It is perhaps testimony to the new relationship of Egypt to Europe that she, too, was so deeply affected by the ideal incorporated in the Exposition Universelle.

To establish Egypt among the concert of “important” nations and to establish himself, perhaps, as a peer of European royalty, Ismā‘īl accepted the invitation of Napoleon III to participate in the Exposition. Indeed, the Egyptian display was one of the most elaborate, including a full-scale model of the Temple of Philae, a populated bazaar and funfair of Arab style, a boathouse encampment, and other reconstructions of Egyptian life and culture. The effort was not unrewarded. The Egyptian exhibit attracted tremendous interest and received numerous medals and citations. It was, perhaps, even worth the loan which Ismā‘īl contracted to defray its expense.

In June 1869, accompanied by a massive entourage, Ismā‘īl reached Paris, where he was received personally by Haussmann. The day after his arrival he opened the Egyptian exhibit at the Champ de Mars and, in the afternoon, visited the Bois de Boulogne. While the question must remain forever unanswered, could it have been on this day that Ismā‘īl met the landscape gardener, Barillet-Deschamps, who had executed the plans for both the Bois de Boulogne and the Champ de Mars? And could it have been then that he first resolved to create in the Birkat Azbakiyyah a formal garden modeled on them? One may merely note the circumstantial evidence that two years later he engaged the services of this same Barillet-Deschamps to help him in his schemes to beautify Cairo.

During the remainder of his sojourn in Paris, Ismā‘īl was entertained repeatedly by Haussmann and, like the other royal visitors, given extended guided tours through the city. Paris, of course, was not his first visit to the French capital. As a young man he had attended the military academy of Saint Cyr and in 1854 had returned to that city on a mission for Scudé Pasha. These trips, however, predated the revolutionary changes introduced by Haussmann. That Ismā‘īl was deeply impressed by the city's reconstruction is attested by reports in contemporary French journals. Thus, while his trip of 1867 cannot be credited with being Ismā‘īl's first introduction to a European capital nor even with creating his interest in city development—which predated his trip—the visit did give Ismā‘īl renewed inspiration and motivation, a fact that can be surmised from the events which directly followed it.

The modern reader, familiar with fiscal controls, vested property interests, and legislative bottlenecks which impede urban improvements, may find it difficult to accept the fact that the whim of any ruler could play so crucial a role in altering a city. Yet this was the last era of royal prerogatives, when the will of the sovereign was supreme. His personal purse was the entire wealth of the country, and his decrees (subjected, of course, to mortgage the future tax revenues of the state even for personally incurred debts.)

After stopping at Constantinople to obtain a long-de nied firman from the Porte that elevated his title from Pasha to Viceroy, Ismā‘īl returned to Cairo and surveyed its depressing degenerations. Where, in his crumbling capital, was there anything to rival what he had seen in Paris, or even in London which he had visited afterward? And how could he love the crowned heads of Europe to a city which reflected so poorly on its ruler? For he had already conceived his plan to mark the opening of the Suez Canal with a gigantic celebration that was to be his own, personal, Exposition. Even Azbakiyyah, then the finest section of the city, dimmed in beauty when compared with Europe.

The solution to this problem was obvious. Cairo must be cleaned, polished, and given at least a façade of respectability. There was no time to dig deep into the eastern city. He was realistic enough to know that even with maximum effort this task was too ambitious a project. The façade of a new Cairo on the western edge of the city would have to suffice. Visitors could be kept to planned itineraries that would show them only the new, victorious Cairo, comparable to their own capitals. The utmost haste was required, however, if this enormous task was to be completed before the planned opening of the Suez Canal. Progress on the latter was rapid when the Porte finally ratified the agreement in 1866, and de Lesseps anticipated the completion of construction by the end of 1869. As it was, however, delays granted Ismā‘īl a slight reprieve, and the opening date was postponed to November 1869.

The two intervening years were marked by an almost frantic pace of municipal construction. Two months after Ismā‘īl's return from abroad he shuffled his ministers and appointed ‘Alī Pasha Mubārik as Minister of Public Works. He commissioned him with the gargantuan responsibility of the task, which was, of course, redrafting plans for the quarter of Ismā‘īlīyah; (2) redeveloping the older and vacant lands peripheral to Azbakiyyah; and (3) drawing up a master plan for the entire city in accordance with the style of Paris.

He had chosen a remarkable man for the job. Born of humble origins in a Delta village, ‘Alī Mubārik had been one of the very few native Egyptians included in Muhammād 'Alī's educational missions to Europe. Between 1845 and 1860 he had studied military and civil engineering. In 1860 he returned to Cairo, where he was named adjutant to the Governor. At 25 he was appointed as one of the most trusted officials of the Khedive's government and was placed in charge of the public works of the city. The Khedive had appointed him in 1859 to the capital and he had been named governor of the city at 32.

63. Ismā‘īl Pasha
engraving in France but had been recalled when ‘Abbās suspended the activities. Under ‘Isāīl he had served first as a member of the Privy Council engaged in the development and later as director of the Qaṣbār Barrage and chief of the engineering subsection of the newly constituted Ministry of Public Works. In 1877 he was sent to Paris on a brief mission to study (with inevitable virtuosity) both the educational and sewage systems of that city. His appointment at Min-
ister of Public Works, and concurrently as Minister of the Awṣaf, as well, therefore, was hardly illogical. He continued to occupy the former position with only brief interruptions during most of his later career. Periodically he served also as Minister of Education and, in addition, found time to write books on military engineering, edu-
cational theory, and the work for which he is deservedly most famous, his twenty-volume Al-Khujait al-Tawmiyyah al-Jadīdah, sections of which are devoted to an historical and topographic description of Cairo.26

‘Allā Muhārāk tells us that the planning of Ismā‘īlīyah took place at the same time plans were made to subdi-
vide the two triangular plots remaining once the smaller rectangle of Asbūlījah Gardens was dammed and fenced. After the plans had been drawn up, Ismā‘īl issued a further order to plan the remainder of the city according to the same principles.27 Both of these events appear to have occurred in 1867 but, because the first set of improvements involved new or raw land whereas the latter required land acquisition and demo-
lution of existing structures before plans could be exec-
uted, it was natural that progress should have been faster on the former. By 1869, Murūq’s quay along the Suez Canal, considerable headway had been made in de-
veloping the new sections; the plans to redevelop the older city were never fully executed, and it was many years before even those few plans of the part that were executed showed any results.

Even before Ismā‘īl’s trip to Paris he had evidently conceived the idea of a new city addition to be built in the area bounded by the north by the road to Bīlāq, on the west by the branch of Al-Qal‘at al-Manṣūrah (today Shāhī‘ al-Qasr al-A‘nī), on the south by the lands of Al-
Lāq, and on the east by the built-up edge of Cairo. While an attempt may have been made to encourage

26 We are fortunate to be able to rely heavily on this firsthand source of data on developments in Cairo under Ismā‘īl. Much of the preceding information about ‘Allā Muhārāk has been taken from his autobiography, included in Al-Khujait al-Tawmiyyah al-Jadīdah, xx–xxvii. Details of his career appear in the archival documents reprinted in ‘Abd al-Samī‘i, Ta’qīb al-
Nīl, Volume ii, Part ii.

27 For the orders relevant to the former, see Muhārāk, Al-
Khujait, vii, 631, 119. Concerning the replanning of the old city, see ibi, vii, 138 and xi, 35.

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settlement in the area known as Ismā‘īlīyah as early as 1865, the area remained unimproved by streets and unsurpassed by utilities until intensive planning and development began before the river in 1870. By 1871, streets by sidewalks had been laid out according to plan, and the district, about one square mile in area, was subdiv-
vided. The Khedive offered the royal lands without charge with 200,000 dollars in lieu of payment, with the stipulation that they be used to build substantial villas surrounded by gardens.28

Although public improvements were in place by the opening of the Canal, the actual settling of the section proceeded cautiously; it retained the appearance of a premature subdivision rather than a substantial community. An observer in the winter of 1879–1880 described its still unfinished state, noting that "...the vicerey has here, for the space of about a square mile, laid out broad macadam-
ized streets with broad trottoirs on each side, as if he were contemplating an European city, but ... not much, however, with the exception of these roads which has yet been done towards carrying out his grand de-
signs, except around the Ezbekiah."29

28 Many versions of the founding of Ismā‘īlīyah are extant in the literature. According to the 1885 edition of Buqacz, "the new town was initiated by a Bey from Bālāq, the Khedive presented the site gratis to anye one who would undertake to erect on each householder a house at least 100 yard square within eighteen months." See Guide to Egypt, p. 295. Clerges, who unfortunately fails to cite his sources here, seems to accept this version, noting merely that the land was acquired in 1886, after which "Ismail Pasha gave gratuitously land to anyone willing to construct there a dwelling worth at least 1,000 Egyptian Pounds." See Le Caire, p. 169.

29 ‘Allā Muhārāk (which I assume as authentic) is in variance with both these secondary sources. ‘Allā Muhārāk states categorically that the offer of free land was made after the area had been improved. See Al-Khujait, ix, 55. We know that streets had not yet been laid out in the Ismā‘īlīyah area by 1870. In 1870, the testimony of ‘Ali Muhārāk and from the graphic evidence of a map of Cairo prepared by the Ministry of Public Works to facilitate its planning. This map, which is evidently the only one re-
plotted in Clerges and dated 1868 (see Le Caire, i, insert before p. 193), shows no streets for the Ismā‘īlīyah quarter and no subdivision of the vacant triangles adjacent to the Asbūlījah. It was obviously made at the end of 1867 or the beginning of 1868, since it shows the Ismā‘īlīyah quarter as a rectangular endowment of Asbūlījah Gardens (made in 1867). Therefore, to date the founding of Ismā‘īlīyah as early as 1865 is to go beyond the premises.

See F. Bartham Zirze, Vicer of Whasington, Egypt of the Khedives and of the Khedivas (Smith, Elder and Company, London, 1897), p. 405. Italic added. This book covers the author’s trip to Egypt made in the winter of 1879–1880 and makes it possible to establish the exact date of his observations. A map dated 1873 (see undatedly later, because it shows Boulevard ‘Abdul ‘Azīz, all not constructed until 1873) and serving as an annex to a Guide annales d’Egypte by Primo-Levernowy, which I had occasion to examine and transcribe in Cairo, shows graphically the limited extent of the buildings in

the new quarter. Numerous structures, including the "New Hotel" and the central block of the Asbūlījah as well as the small triangular patches north of the central mosque (Pulauli) of Bīb al-Laq and both north and south of the Asbūlījah. In con-
trast, except for a few precious palaces, the entire new quarter to the south is absolutely vacant. A slightly later descrip-
tion of the "modern bricklayer’s paradise," Ismā‘īlī’s city is found in Colonel Wilson, Picturesque Palestine, Sinai and Egypt (D. Appleton Company, New York, 1883), Division 4 dealing with Cairo. See especially p. 194.

30 Muhārāk, Al-Khujait, i, 59. The estimate includes the section of the currency.

31 The Khedivial order to acquire the land was issued just before Ismā‘īl’s second trip to Paris in 1869, which he made for the purpose of extending personal invitations to the opening of the Suez Canal. See ‘Abd al-Samī‘i, Ta’qīb al-Nīl, Volume ii, Part ii, p. 57.

November canal celebrations;32 and other public edifices built in the European style. The remaining structures in the vicinity of the Asbūlījah were whitewashed and ren-
avonated; gaslights were installed along all adjacent streets; Shāhī‘ Mukī was "upgraded" and Europeanized on the extremity closest to the Asbūlījah; and the entire mountainous area of the nearby mountains was given gayly painted red and white stripes for the occasion.

The central park of Asbūlījah, however, still remained in only partially finished form. Its preliminary design of a large circle at the core and straight radiating spokes was, to say the least, somewhat unimaginative. In a bold move, Ismā‘īl imported the French landscape architect whose work he had admired in the Bois de Boulogne and Champ de Mars and commissioned him to redesign Asbūlījah as a Parc Monceau, complete with the free-
form pool, groto, bridges, and belvederes which consti-
tuted the inevitable cliché of a nineteenth-century French garden. Thanks to the fast growing season of Egypt, shrubs and flowers were already blooming when the guests arrived in November.33

The need to prepare the city for the coming celebra-

32 The opening performance, Rigoletto, was given for the Empress Eugenie and others on November 1, 1869. Ismā‘īl com-
missioned Verdi to write an opera on an Egyptian theme, and two years later alda was performed at the Cairo Opera House. The Opera House still stands, predictably, in its once lovely but not too fashionable district, but there have been rumors of its planned demolition.

33 For a description of the completed Asbūlījah, see on the complimentary side, H. de Vasvany, Description de L’Egypte: Le Caire et ses environs (T. Mon et Cie, Paris, 1843), pp. 193–195. Less enthusiasm was shown in the acid comments of Rhond presented later in this chapter.
These developments on the Jazirah and the western bank, plus the construction of another Khedivial palace at Jirah and the location there of the terminus of the new rail line serving Upper Egypt, all contributed to a growing need for a bridge to connect the two banks of the Nile. Ferries and small wind-propelled craft were the only means for crossing from one side to the other, a fact which intensified the contrast between the rural western shore and the urban eastern bank. It was perhaps natural that the idea of a bridge should suggest itself at this time.

In the spring of 1869, just before setting out again for Europe, Isma'il contracted the French firm of Fives-Lille to construct a massive iron swing-bridge between the eastern shore at Qar al-Nil and the southern tip of the Jazirah, a span of over 400 meters. A smaller span across the Blind Nile (the Kubri al-Jale') was also planned at this time to complete the connection with the western shore. Neither of these bridges, however, could be completed in time for the opening of the Canal and the temporary expedience of a floating boat-bridge was resorted to in order to give the Empress Eugenie access to her apartments on the Jazirah. By 1871, the smaller bridge over the Blind Nile was completed and, in the following year, the finished swing-bridge was demonstrated before an incredulous audience.46 The knitting together of the two sides of the river was thus begun.

For many decades these bridges constituted the sole link between east and west. It was not until the twentieth century were they supplemented by a series of additional connections which finally and forever joined both shores, permitting the development of a single metropolis spanning the river.

It was not only the new areas that received attention in these busy years, however. In accordance with Isma'il's request, a master plan for the entire existing city was drawn up with incredible speed by 'Ali Mubarak's subordinate in the Ministry of Public Works, Mahmoud Falaki. It was a plan that would have elicited Hausmann's most enthusiastic support, although it evoked a reverse response from the contemporary French architect, Rhood, who romanticized medieval Cairo and deplored its mechanical modernization.47

66. Tourists lounge in the 'Umar Khayyam Hotel today

68. Second Qar al-Nil Bridge
69. Cloverleaf with underpass: present approach to the Qar al-Nil Bridge

One visitor who recorded her experiences was the Honorable Mrs. William Grey, in her *Journal of a Visit to Egypt, Constantinople, the Crimea, Greece, etc., in the State of the Prince and Princess of Wales* (Harper and Bros., New York, 1870). Included in her account of the trip made by the Prince and Princess was the following concerning their visit to the pyramids on March 15, 1869: "Off we drove over a rather rough road, which has only lately been made to the Pyramids. . . . Our road led through a most beautiful asuka avenue almost all the way. . . ." Quoted from p. 516.

46 For information on the palace at Jirah and the extensive gardens designed by Barillet Deschamps, see Muhairi, *El Chaher*, 1, 84. The railway between Jirah and Imbaba and the Upper Egyptian terminus at al-Mahyia was begun in 1865 but was not completed until several years later. See Amin Sinai, *Ta'rikh al-Masr*, Volume II, Part II, p. 612, and Wilkinson, *A Handbook for Travellers in Egypt* (1866 edn. with supplement to 1869), pp. 2, 7. A rail bridge to connect the Delta Line terminating at Elb al-Husayn with the Upper Egyptian line terminating on the west bank was not constructed until the twentieth century. For information on the first Qar al-Nil Bridge, see Amin Sinai, *op. cit.*, Volume II, Part II, p. 185 for contract and p. 929 for demonstration of opening.

47 One of the most acid critiques ever leveled against any master plan was that of Arthur Bland concerning Cairo. He recalled the early days of Isma'il when 'the Viceroy and his ministers spoke then with glowing enthusiasm of the rebirth of
The plan advocated a direct attack upon what was becoming Cairo's most pressing problem — traffic. Carriages were multiplying at an "alarming" rate, while there remained only a few streets wide enough to admit one, much less two vehicles abreast. It will be recalled that in 1253 Cairo had but one carriage, the Pasha's. By 1784, when ownership remained a royal prerogative, there were some thirty to forty carriages at large in the city. By the time of Isma'il's, however, the monopoly had been broken, with carriages available for hire and private ownership extending to the merchant as well as to the lower echelons of the ruling class. Mubārak's census of vehicles about 1875 enumerated almost 900 passenger carriages and twice that number of transport carriages.\(^{44}\)

Clearly there was a need to "break into" the medieval city. Muhammad 'Ali had already begun this process by opening the first section of the Rue Neveu (al-Sikkah al-Jadidah). Isma'il continued the efforts of his predecessors and finally extended that road all the way to the edge of the eastern desert. Now the master plan contemplated a network of supplementary lateral and longitudinal thoroughfares as well as numerous connecting diagonals.

Map XIII that follows shows my reconstruction of the maysādāt (open spaces) and the thoroughfares projected in the master plan for the old city.\(^{45}\) These were to be Cairo according to the expeditions methods of Paris. They displayed with pride their plans for new quarters laid out in checkerboards, and for bold new thoroughfares that could evoke in one only a shudder. In all directions, the ancient city of the caliphs and sultans was constricted by straight and endless lanes which formed patterns like those emblazoned on coats of arms ... on paper. The exception of an American city in the heart of a virgin forest." See Arthur Roudiez, Croisade et peuples des villes de l'Orient, composed and printed from the November 1884, and February 1885, issues of La Gazette des Beaux Arts (A. Quinini, Paris, 1885). The quotation is my translation of an excerpt from p. 1.  

\(^{44}\) In his edition of 1877, Wilkinson remarks sarcastically on the ostentatious style of many of these vehicles. "Many of the private carriages are ostentatious. They might be supposed to have come from some European museums, which had preserved them unchanged for a century or two, and had taken advantage of the new want in Cairo, and of the insignificance of the purchasers, to sell off all of the duplicates that could be spared." A Handbook for Travellers in Egypt, p. 133. Mubarak. Al-Khāli, 1, 150, lists 124 cars for water: 1975 cars for goods, 400 privately owned passenger carriages and 486 passenger carriages for hire. 

\(^{45}\) This map of Cairo at the end of Isma'il's reign shows the new quarters of Mubarak (west and south of the Gardens of Azkulyakh) and al-Fājiḥah (north of al-Maqs, out of the train station and south of the Isma'ilīyah Canal), the replanned triangles north and south of Azkulyakh, as well as the area covered by the medieval city of Cairo. My reconstruction of the partially executed master plan is shown in broken lines and the maysādāt listed above have been located by their corresponding numbers. Actually no map of the master plan has survived. This tentative superimposed on the maze-like pattern of the preindustrial city. The motif was everywhere the same. At the core of the system were the open spaces out of which were to radiate wide, straight streets cutting through the old bāshā-like the boulevards of Hausmann's Paris. Among the maysādāt anticipated by the plan were those of (1) al-Atbahāb al-Khālidīh, (2) 'Abdīn, (3) Khāzīzīn, (4) Bīb al-Hadīd, (5) Sayyīdāt Zaynāb, (6) Bīb al-Dirī, (7) Bīb al-Futūh, (8) Muhammad 'Ali, (9) Sultan Ḥasan, (10) Qur al-Nil, (11) Theatro or Opera, (12) Birikat al-Fīl, (13) al-Azhār (not near the mosque of that name but in Bīb al-Dirī). Each of these was in turn to be connected with others, which had it, were broken, would have been given to Cairo the pattern shown in broken lines on the map.

But this new was meant to be. It was quite possible to impose his system on the tabbūla rasā of the new quarters. Thus, most of the squares and streets projected for the western section of the city were built according to plan, including the maysādāt of Kullīn Qur al-Nil, Bīb al-Dirī, al-Azhār (now Falaki Square), 'Abdīn (fortuitously open, thanks to a preexisting birkah) and their connecting streets. The three maysādāt bordering the Azkulyakh Gardens—Khāzīzīn, Opera, and al-Atbahāb al-Khālidīh —were also completed with little difficulty, since they were located on essentially vacant land. But in the older areas the need to survey properties, to settle on compensation, to acquire the sites and demolish the existing structures made the process lengthy, expensive, and uncertain. While a small beginning was made in the early 1870s to plan for the existing quarters, the difficulties proved overwhelming and, of the ambitious program, only two maysādāt and two thoroughfares saw fruition. The maysādāt were those of Bīb al-Hadīd (which required no clearance) and Muhammad 'Ali (which required only peripheral land acquisition since it was located on the site of the old Qarnāyyūn). The two thoroughfares, Shāhī Côt-Bey connecting Bīb al-Hadīd with Maydān Khāzīzīn, and its continuation, the Boulevard Muhammad 'Ali, between Maydān al-Atbahāb al-Khālidīh and the yet-unfinished maysādāt beyond the Mosque of Sultan Ḥasan at the foot of the Citadel, were not undertaken seriously until 1873 and were not completed until 192 years later. Despite this overall failure of Isma'il's master plan, the scheme continued to exert a lasting influence on later attempts to open up the old city, and a number of projected streets and maysādāt were eventually constructed almost as Falaki had designed them.

This tremendous flurry of municipal planning and reconstruction is based on the verbal descriptions given by Mubārak. See his Al-Khāli, 1, 83; 11, 65, 66, 68, 83, 18:186, 19, 73.

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The city developments added by Isma'il, 1869-1870
priceless mosques and monuments was so high that many wealthy tourists had been deterred here and there to spare some of the most precious. Nevertheless, once the final plans were drawn in 1873, the remaining plots of land were speedily acquired and construction began. While the eastern street was considerably wider than al-Sikka al-Jaladah and, unlike that prototype, was provided with wide sidewalks, shaded in part by trees and in other sections by the arcades of buildings that were swiftly built to line it, Gaslights were installed along the entire length of the road which, being the pride and joy of the monarch, was compulsively swept thrice daily to keep it immaculate. The dream of Muhammad 'Ali was thus finally realized.

One last project was also completed about this time. Ismail replaced the old palace at 'Abdin with an enormous horseshoe-shaped structure which he considered to be in the "best" European style, a project finished in 1874. It is perhaps ironic that events which helped to precipitate the downfall of independent Khedivial power were soon to take place outside this structure which represented one of Ismail's last contributions to the city. The two were not unrelated.

The building of the canals, railroads, telegraphs, etc., the creation of a Western-type city with all the "symbols" of culture, lavish entertainments and luxuriant palaces, plus the heavy tributes exacted by Constantinople in return for each new concession of autonomy had all raised the expenditures of the Egyptian government to unprecedented high levels. At this very time, reforms such as the return of much royal land to private ownership, the failure of the state monopolies, and the cracking down on the illicit slave trade were all serving to dec- crease, relatively, the resources of the state. The expanding gap between revenues and expenditures was being methodically filled by loans from the financial houses of Europe, a process that led to mortgaging not only future revenues but even Egypt's share in the profits of the Canal, the initial cause of much of her borrowing. The first loan had been negotiated one year before Ismail took office. In 1864 Sa'id had borrowed over 3 million pounds, primarily to help finance the Canal. Ismail simply continued this precedent, contracting substantial debts in 1864, 1865, 1867, 1868, and in following years with disquieting regularity.

without knowing where it was going, and landed some two kilometers away, at a formidable angle from the Sultan Hanan Mosque, which it could not avoid encountering." My translation from A. Rhoud, Coup d'États, p. 23.

"The last of these concessions, purchased at a high price, was the future Khanukha, which Ismail made the terminus of succession pass from the Khedive to his eldest son and so on. Before this, succession had been to the oldest male of the Muhammad 'Ali line.

Financial difficulties approached a crisis in 1872 as creditors became more insistent. Having little else left to pawn, Ismail considered borrowing on Egypt's share of the Canal itself. Knowledge of his negotiations with a French firm came to the attention of Darrafi, then Prime Minister of Victoria's England, who pulled off what must be considered one of the most fantastic financial coups in history. Prior to Cabinet approval, he purchased all of Egypt's shares in the Suez Canal with only 4 million pounds of Rothschild's money. The results of this bargain were to be even more far-reaching than Darrafi could have predicted, for they led to England's immediate involvement in the financial management of Egypt and, some seven years later, to her actual military occupation and governing of the country.

The camel's nose was already within the tent in 1876 when Mr. Stephen Cave, selected by the British government as "financial adviser" to the Khedive, recommended the consolidation of all Egypt's debts—which by then amounted to some 91 million pounds—and the appointment of a commission of financial control. This commission was soon replaced by the Dual Control, with a British official supervising revenues and a French representative auditing expenditures. In 1878 this system was relinquished in favor of a basic reorganization of the Egyptian government. Ismail was demoted to constitutional monarch and real power was given to the cabinet which included an English Minister of Finance and a French Minister of Public Works. This Alice-in-Wonderland situation proved too much for the Khedive who made a last feeble effort to extort the camel, but it was already too late. He dismissed his ministers in April of 1879 and in June he was in turn deposed by the Sultan in response to English and French pressure. The tent belonged to the camel.

Thus ended rather ignobly the Age of Ismail. In twelve years he had altered the face of Cairo; within sixteen he had lost his country. His son, Tawfik, inherited his hollow throne, his public debt amounting by then to almost 100 million pounds, and inherited the virtual management of Egypt by a revived Dual Control, the English member of which was Evelyn Baring (later elevated to the title Lord Cromer) who in a few years became the British agent and Consul General, and virtual ruler during the occupation. He also inherited a country on the verge of revolution. A revolt in the army, led by ex-peasant Colonel 'Urbi, began in 1879 with riots around the 'Abdin Palace and culminated on Sep-

The Otoman Gardens of Bariller-Descamps

The Jzith campus of Cairo University

city building culminated in the fall of 1869 with the festivities which attended the dramatic opening of the Suez Canal on the 17th of November. From October through December, Cairo, Alexandria, Upper Egypt, and the new Canal town of Ismailiyah were thronged with European visitors. Not only royalty but journalists (including Théophile Gautier), physicians, savants and archaeologists, government officials, and military officers filled the streets, consumed the banquets, clambered up the pyramids, and in general enjoyed the planned and unplanned spectacles before them. In reading Western accounts of the fête, one senses that guests and host operated somewhat at cross purposes. Ismail did his best to create a European image of himself and his country;
THE MODERN ERA

Thus began a new phase of Cairo's history, a phase marked by the final evolution of a self-contained colonial city that went, by a total revolution in the technology of transportation, and by the development of an Egyptian middle-class city on the north. During the next decades, barrages, canals, and the dam at Aswán (first completed in 1892) helped to reorganize Egyptian agriculture, creating an agricultural surplus which permitted Cairo's population to grow faster than the country as a whole. During the ensuing decades mass transit and then the automobile made their appearances, permitting the physical expansion of the city along the newly created axes of transportation. The next decades also saw an intensification of nationalist sentiment and ideology which led eventually to Egypt's independence.

These momentous events were sluggish in starting, however, and few of their results became apparent until the terminal years of the nineteenth century. The first decade of British occupation witnessed no drastic alterations in the development of the metropolis but merely a continuation of the trends that had already been set in motion during the later years of Ismâ'îl's reign. Whether stagnation was due to the fact that power was concentrated in the hands of a foreign group that viewed its responsibilities as "temporary" and "custodial" rather than developmental, or whether it was an inevitable reenactment of the 26 years between 1833 and 1858 when 1883 and 1888 were characterized accurately as a "race against the bankruptcy" is, for our purposes, irrelevant.

When Britain stumbled into the affairs of Egypt in 1881, the initial reaction to its invasion was to feel merry to French interests and to hope for a speedy withdrawal. Throughout the first decade her official documents always refer to the temporary nature of the occupation and rehearse her intention to evacuate the country as soon as possible. But the economic factors which had brought the campaign into being was a war, had continued to serve their purpose, and the French occupation had not been removed. In these protestations—which seemed to have grown more vociferous as Britain became more firmly entrenched—there was an increasing reconciliation to her role, and not a little by her realization that Egypt offered riches that the invasion had hitherto and by her increasing dependence upon the Suez Canal for her Indian traffic. These "forced" her to tighten her hold over Egypt even as she pressed elaborate service to evacuation.

ORIGINS OF MODERN CAIRO

The situation was anomalous. Officially, Egypt remained a member of the Ottoman empire subject to the ultimate authority of the Sultan in Constantinople; but in 1879 the Khedive Tawfiq (1879-1914), son and successor to the late Ismâ'îl, in reality, decided the terms of the British protection treaty. By 1882, the Egyptian government had become of 75,000 in 1886; subject to the approval of Great Britain. By 1898, Sir Charles Warren, began the task of construction. By 1895 the barrages were working in the finest fashion envisaged sixty years earlier, bringing not only the barriers of other products (of soil depletion and bilharzias) to the Delta.

This other irrigation projects helped to increase Egypt's agricultural productivity and expand the area of irrigation. Coupled with the establishment of elementary health and sanitation measures, this seems to have been responsible for the substantial population increase which Egypt experienced between 1882 and 1897. During this decade and a half, the number of inhabitants increased from about 63 million to over 97 million.44

Ismâ'îl's Cairo project increased from over 40,000 (my revised estimate) in 1882 to almost 600,000 by the end of the century. As before, her growth came not from natural increase but from migration, since deaths still outnumbered births in the capital, making it impossible for the city to maintain even a constant population without continuous replenishment from the countryside. The demographic revolution that was to drive urban death rates faster than rural ones had not yet occurred. Some of Cairo's increase resulted from foreign immigration, as Greeks came in search of commercial opportunities, the machine, and so it is not surprising that the city's population grew over 1 million and more, and Armenians, and Jewish merchants who provided cheap Western goods to the indigenous population.

For the south, the area of Ismâ'îl's 'Bahà', which had been opened up for development purposes, was turned over to urban uses. Villas mushroomed in the southern half while higher density developments proliferated to the north, particularly in the neighborhood of the new commonwealths and al-Makârim and al-Shirâ'ī's Bālīq. Despite these changes, however, the area retained much of its suburban aspect, with buildings still interspersed by the gardens and agricultural plots which dominated the countryside.

Also that government buildings and ministry offices began to gravitate toward the linear strip east of and parallel to the Sâ'îr al-Qâsir al-Aynî south of Bâb al-Qâsir. This land, originally the site of Ismâ'îl's plans for the construction of the first half of the century, had been retained in royal ownership. As early as the time of Ismâ'îl it contained the Ministry of Public Works during the later period many additional ministries were grouped around it. These later nineteenth-century constructions formed the nucleus of the present governmental zone, known as al-Isnâ'ār and Dawâ'în (pl. dîwâns). The commonality of these developments, including changes in land values in the new developments of western Cairo at that time, may be found in Youssouf Arbi, Pasha, État sur les causes du renoncement de la vie matérielle au Caire dans le dernier tiers du XIXe siècle, à l'oeuvre, 12e Série, Études, 32, 1979, "Mémoriaux présentés à l'Institut Égyptien (Imprimerie du Haut-Commissariat Français d'Archéologie Orientale, Cairo: 1907), pp. 111-115."
tration of civil servants to staff these ministries led naturally to an increased demand for housing in the vicinity. Large white Victorian mansions, designed chiefly for the foreign "advisors," began to be constructed along the western edge of the governmental zone while, due east of the strip, new apartment houses were built for higher-ranking Egyptian officials. Durūb al-Jumhūriyya in the Sayyidah Zaynab section owed its upgrading to this new demand, and the Ḥilmiyya quarter (on the site of the former Birkaṭ al-Fīl) was later developed in response to these same pressures.

Only along the shore of the Nile did former patterns of land use persist. These riverine lands were still not completely free of flood danger. In addition, the Khedivial family still held title to the palaces and royal gardens that stretched all the way from the Qasr al-Nil barracks southward to the Qasr al-ʿAyyān Hospital. Farther south near the Fām al-Khalīl, the land formerly ceded to the Water Company and then abandoned was in disputed ownership, which precluded the possibility of its subdivision and sale. The expansion of the city into the river-front strip, which is now the luxurious façade of the contemporary city, had to await the great speculative boom of the next century.

To the north of the existing city, parallel developments were taking place, particularly in the Fajãlīyya district, that triangular plot wedged in between the old Coptic quarter, just north of the Aṣbakīyya Gardens, and the diagonal course of the Ismāʿīliyya Canal. By 1880 this area had already been tentatively subdivided and, in the decade that followed, row apartment houses architecturally reminiscent of the Passy Quarter of Paris began to be constructed. This area provided a safety valve for the heavily overcrowded and obsolescent Coptic quarter. Wealthier Christian merchants joined the recently arrived European migrants there to create a new middle-class zone which, via the roads built by Ismāʿīl (Shārīʿ al-Suq al-Qasāʾim and Shārīʿ Nubār Pasha, formerly the Qasr al-Dīkka), was directly connected to the newly evolved business district near Aṣbakīyya.

Only one large pocket of potential settlement within the circuit of the existing city remained completely unexploited until the 1880s. This was the broad triangular plot bounded on the south by Shārīʿ al-Qalāʿ, on the east by Shārīʿ Nubār Pasha (now Shārīʿ al-Tūlūn and Shārīʿ Jumhūrīyya, respectively) and on the northwest by the Ismāʿīliyya Canal. This area had once been submerged beneath the main channel of the Nile before the river shifted its course. It still remained a deep depression in the terrain where swamps combined with the concentration of canals in the vicinity to make it an ideal breeding ground for mosquitoes. The neglected wasteland became more and more conspicuous as the city gradually encompassed it. The draining and leveling of this site and the filling in of the superfluous canals was undertaken by Khedive Tawfiq in the mid-1880s, thus creating the quarter known today as al-Tawfiqīyya, an integral part of the present central business district. When the land was finally subdivided and sold in 1890-1900, it found an eager market due to its proximity to the very heart of the new "western" city. Plots in the district brought prices well above those in the more peripheral zone of thousands of rural migrants who had been drawn to the capital. A new European-style city had developed parallel to it on the east and had begun to encircle it on the north, but this community remained socially and physically distinct. Each city had a predictable continuity of its own.

This continuity was abruptly shattered just as the nineteenth century drew to a close. The cause was a total revolution in both the demand and supply elements of urban growth. The demographic revolution in the country finally reached Cairo, and, combined with an unprecedented trend toward urbanization, served to swell the demand for capital city residence. At the very same time, a revolution in the transport technology of the city (tramways) opened vast peripheral areas to urban settlement, creating, as it were, a new supply of land to meet the demand pressures of population. The combined impact of these changes stamped into existence within the span of a single lifetime the vast attenuated metropolis known to us today.

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Ismāʿīliyya, and it was not long before large blocks of apartment houses sprang up on land formerly vacant or occupied by destitute squatters. Only a few isolated tracts of hovel-covered waṣfī land detracted from its opulent appearance.

Thus, up to 1896, the developments which took place in Cairo were entirely predictable within the framework of growth that had been established by Ismāʿīl's planners. The promise and potential inherent in the city of Ismāʿīl were being methodically fulfilled during the decade and a half that followed his exile, due to the pressures exerted by a steadily increasing population and to the changing demands of a still small but infinitely powerful foreign community. By the end of the nineteenth century Cairo's population was approaching 650,000, and the city had completed its physical and ecological transition into two distinct communities. The old native city had been left relatively intact from the premodern age, its abandoned areas reconstructed on the medieval pattern to house the

Chergy, Le Caire, 1, 232.
The Exploding Demand for Capital City Residence

By 1957 Cairo contained within its boundaries at least as many people as lived in all of Egypt; when the French Expedition made its population estimate live estimate more than a century and a half earlier. Within that relatively brief span of history, the Egyptian population had increased from 8 to 24 million—while Cairo's population had become fully twelve times greater than it had been in 1801. It is impossible to comprehend the expansion that occurred within the city of Cairo without recognizing that Egypt's demographic structure and her entire pattern of urbanization had been totally transformed within that critical century and a half. From an underpopulated country whose major barrier to economic development appeared to have been a shortage of labor, Egypt became one of the world's most frequently cited examples of an overpopulated nation whose rapid rate of natural increase is considered by many to be a serious obstacle to her industrialization and a rising standard of living. During the same span of time, Egypt was gradually transformed from an almost entirely agrarian country to one in which more than a tenth of the population lived in urban areas. Given the importance of Cairo's future as an economic and cultural center, it was not unnatural that she absorbed a substantial portion of this newly urbanizing population. She exploded from a compact rectangle, only 5 square miles in extent, housing a "bare" quarter of a million inhabitants to an immense metropolitan conurbation whose millions of inhabitants and over 75 square miles of area still do not totally comprehend the urbanized region of which she is the center.

This expansion was the result of a demographic revolution that began in the nineteenth century (and that has not fully run its course), compounded by a trend of urbanization that began even earlier in the twentieth century. Before tracing Cairo's growth decade by decade in the present century, it is necessary to paint with rough brush strokes the broader background of national growth against which the Cairo foreground may be placed. Although Egypt had experienced recurrent cycles of demographic growth and decline during her earlier history, it was not until the nineteenth century that her population began its first uprising in the contemporary cycle. The "revolution" that occurred in that century was

that this population was roughly equivalent to the level that some scholars have estimated as a maximum during Pharaonic times. It appears to have been the saturation level of the country when the economy was based upon agriculture and when the exploitation of the natural irrigation powers of the Nile was at an extremely low point. The advent of the Industrial Revolution and the technological evolution of dams and barrages permitted the wide-scale conversion from basin to perennial irrigation, which was this asymptotic ceiling exceeded.

This increase within fifty years is impressive and can be accounted for only partially by the settling of the bedins, which took place at this time, and by the immigration to Egypt from other parts of the Ottoman empire and from Europe. While the latter was substantial in comparison to the past, it was numerically insignificant in terms of overall growth. Even in the absence of reliable vital statistics for the era, the conclusion is inescapable that the increase was primarily the result of a rather marked decline in mortality rates and, consequently, of a sharp increase in the rate of natural increase, since there was apparently no change in fertility.

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The demand for capital city residence was a less effective killer than environmental and contagious diseases, the high death rate persisted. Throughout the entire eighteenth century, the death rate averaged 43 per 1000 in Cairo, with like rates in other parts of the country. Egypt's population continued to increase at the same rate as before, and her natural growth was 0.4 percent per year. See explanation on p. 18. Growth rates after 1866 were even higher.
The modern era of urbanization in Egypt and Cairo, as reflected in the data, shows a significant increase in population over the course of several decades. Table 1 illustrates the annual rates of population increase for Egypt and Cairo, categorized by intercensal periods, 1897-1960.

<table>
<thead>
<tr>
<th>Intercensal Period</th>
<th>Royc Increase Egypt (0% Caire)</th>
<th>Cairo (0% Caire)</th>
<th>Excess</th>
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<tr>
<td>1897-1907</td>
<td>1.5</td>
<td>1.4</td>
<td>1.0</td>
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<tr>
<td>1907-1917</td>
<td>1.3</td>
<td>1.6</td>
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<tr>
<td>1917-1927</td>
<td>1.1</td>
<td>3.0</td>
<td>1.9</td>
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<tr>
<td>1927-1937</td>
<td>1.2</td>
<td>2.1</td>
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<tr>
<td>1937-1947</td>
<td>1.8</td>
<td>4.8</td>
<td>3.0</td>
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<tr>
<td>1947-1957</td>
<td>1.5</td>
<td>6.0</td>
<td>4.5</td>
</tr>
<tr>
<td>1957-1960</td>
<td>1.5</td>
<td>2.3</td>
<td>0.8</td>
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The data shows a consistent increase in the population of Cairo, with the excess growth rate indicating a significant migration towards the city. The urbanization process, driven by migration from rural areas, has led to a substantial growth in the urban population, especially in Cairo.

In the context of the 19th and 20th centuries, Cairo has been a hub of cultural, political, and economic activities. The city's growth was not only due to natural increase but also to a significant influx of rural migrants seeking better opportunities. The rapid urbanization process in Cairo has had profound impacts on the city's physical and social infrastructure, leading to challenges such as overcrowding, poverty, and urban decay.

The modern era has also seen significant technological advancements, including the invention of the modern city planning concepts and the implementation of public health improvements. These developments have played a critical role in shaping the modern cityscape of Cairo.

In conclusion, the growth of Cairo and its role in the modern era reflect broader trends in urbanization, where cities grow not only due to natural processes but also due to migration and urban policies. Understanding these processes is crucial for planning sustainable urban futures.
30 percent of Cairo's growth could be attributed to natural increase, while the remaining 70 percent due to in-migration, almost two-thirds was due to an influx of foreigners.13

The decade between 1907 and 1917 was, on the contrary, a period of much slower population growth which co- incided with a financial retrenchment precipitated by the "crash" of 1907 and a dramatic cessation of many of the employment opportunities that the preceding boom had nurtured. Economic recovery did not begin until the beginning of World War I, and this recovery, in Egypt at least, was really not experienced until about 1917 when Britain concentrated many of its installations and personnel in the Cairo region. This showing down of urban growth is masked, statistically, by a boundary expansion of the city which must be isolated before internal developments can be evaluated.

Between 1907 and 1917, the boundary of Cairo, which had formerly included only that portion of the urban region on the east bank of the Nile, was expanded to include the settled portion on the west bank as well, which increased the area of the city from 686 to 917 square kilometers. By 1917, therefore, the city included 34,620 persons living in the primarily agricultural communities and estates that dotted the western shore. When one eliminates this "fictitious" growth from the inter- national level of births over the entire city, the increase in the eastern shore had increased by only 76,000; that is, the absolute increase was even less than the preceding decade of expansion and the relative growth rate for the city could reach a maximum of about 1.2.

The major reason for this decrease in the rate of growth appears to have been a virtual cessation of foreign immigration to Egypt. The Bourse crash in 1907 (which precipitated a severe depression) and the onset of World War I, and the almost complete stoppage of immigration to Egypt in the period 1914-1918, and the "fictitious" growth due to the boundary expansion, were the major factors. The population of Cairo rose from 1,336,400 in 1907 to 1,854,600 in 1917, or a net increase of 518,200, or less than 5 percent.

12 Among the sources that treat the causes and events leading to the crisis are: Levin Levy, "Les événements de 1907 et la situation actuelle de l'Egypte," in L'africque Contemporaine, Vol- lume 11 (November 1920), pp. 395-403; and F. Legrand, Les fluctuations de prix et les causes de 1907 et 1914 en Egypte (J. Grabal, Nancy: 1922). The primary introduction and Chaper I, pp. 1-95. See Chapter 9, below, for additional details.

13 Table 7 of Census of Egypt, 1907, pp. 43-48, shows data on the western bank of the Nile in Cairo in this year. The figure of foreign born may be obtained by summing all residents born overseas in the reports of the Department of Immigration in the Census of Egypt, 1907. Our estimate of the foreign-born population resident on the east bank portion of Cairo in that year was derived in the following manner. First, the population on the west bank of the Nile was subtracted from the total. Second, the census union of the figures given in the tables for the western district was so minimal that, for practical purposes, this group could be ignored. Third, Table 10a, Volume 12, Census of Egypt, 1917 was consulted. (See pp. 257-259.) This table shows "Local-born Population Classified by Birthplaces," and includes an estimate for the "other" or overseas born in 1917. In 1907, residents had been born in Egypt and, of these, 36,805 had been born in the Province of Judea (of which the west bank had been a substantial rural expanse) and 58,400 in India. Present residents on the west bank were therefore subtracted from this subtotal, yielding an estimated Egypt-born-born population on the east bank of 65,662. Subtracting this figure from the total population on the east bank in 1917, one estimates that there were approxi- mately 26,000 foreign-born in the city in that year. The reader is cautioned here concerning the distinction between "foreign-born" and "foreign national." The Census of Egypt, 1917, states that the "foreign" born in 1917 was almost twice as large as the "foreign national." It should be noted that the foreign communities in Egypt tended to retain their inherited nationalities (the principle of blood rather than soil having been the dominant of citizenship) even after generations of residence in that country, and, in addition, due to the special privileges accorded foreign nations under the Capitulations, nations often sought the protection of a foreign consulate. But because of these factors, I have been forced into the rather cautious methodology expressed above.

For a discussion of the causes of the depression, see T. E. Conant, "The Great Europe War and Egypt," Economic Record, November 1927.

14 These figures have been taken from the Summary Table 3, p. 3, contained in the Census of Egypt, Government of Egypt (Government Press, Cairo: 1917). Evidently, Egyptian demogra- phers found it difficult to compute the exact number of inhabitants of each category. Both population figures are higher than those recorded in the Census of Egypt, 1907, Table 4, p. 30.

15 The basis for this assumption is, in part, intuitive, in the sense that it is the assumption which best reconciles existing vital statistics data available for the period with known historical growth rates. While no absolute proof can be offered, the following is as close as one can come. In a study of the birth rates in the Ministry of Interior, Department of Public Health, issued a set of vital statistics on births and deaths in the Principal Towns of Egypt During the First and Second Quarters of 1917 (National Office Printing Office, Cairo: 1918). Data are presented separately. In January-March of 1917, the CBR for Cairo was computed at 36.7 and, since this was the most difficult period during that year, the CDR was 3.6. During April-June, the com- puted CBR was 41.2 while the CDR was 6.3. For the corres- ponding quarters of 1916, the rates were respectively: CBR 49.0 for the first quarter and 44.4 for the second quarter; CDR 26.6 for the first quarter and 45.6 for the second quarter. Assuming the natural increase for each quarter in each year, one arrives at about 7,2700, a figure quite consistent with evidence from other sources.

While I shall attempt to avoid too technical a discussion of Egyptian statistics, some explanation of why I have interpreted existing data rather "freely" must be given to the specialist. Vital statistics, that is, annual births and deaths from which mortality and fertility rates can be computed, have been collected in Egypt since the time of Isma'il. The quality of this reporting, particularly in rural areas and until very recently even in urban ones, has left much to be desired. Underreporting has been the rule rather than the exception. While this no longer of statistical significance, an important source of error may remain. Reporting among the urban dwellers may still be as high as one-third outside of the major towns. Series of crude birth and death rates for Egypt and for Cairo may be found in the years 1895-1915 in the annual reports of the health bureau. Cleghorn, "Le Caire, 18-24, has conveniently com- piled the series of crude birth and death rates for Cairo between 1895 and 1919, which is easily brought up to date by the govern- ment publications noted above.

In Cairo, one has the data even from this volume because they would require substantial revision. The major conclusion that can be reached by a demographer when confronted with these figures is that the overall national statistics are not correct, and that the constraints that were required to be correct them cannot be reconstructed from the past. For example, if we accept the figures at face value, it would appear that Cairo's crude birth rate has increased over the past century from 45-55 to 20-30. If so, one can compute total fertility rates in rural areas with in urban areas and conclude, on the basis of published statistics, that the urban birth rate is almost twice as great as the rural rate. This, from the few careful demographic analyses that have thus far been made, is certainly untrue. Among the studies that may be consulted for "correct" data are: the "Demographic Surveys in Selected Areas in Egypt" (unpublished Ph.D. dissertation, Princeton Univer- sity, 1950); and the "Demographic Migration and Fertility Rates for Egypt Based on the Stability of Census Age Distributions," Minikah: Memorial Fund Quarterly, XXXII (July 1955), 245-268; S. H. Abd-Al-Aziz, "Life Table Functions for Egypt Based
average recorded CDR during the decade was about 35,000 while the average recorded CDR remained fairly constant at about 42,000; both figures for Cairo are unreasonably low. It is widely believed that these low figures reflect underreporting of deaths in Cairo, especially in the poor districts such as the Faqih district. This underreporting is likely to be due to the fact that the data are based on the death certificate, which is not always accurate. In addition, there is a high degree of emigration from Cairo to other parts of Egypt, which further complicates the interpretation of the data. It is difficult to determine the extent to which these factors have contributed to the observed trend in CDR. However, the general trend towards a decline in mortality rates suggests a possible improvement in public health conditions in Cairo. Further research is needed to better understand the underlying causes of this trend.
most of the city, however, did not benefit even from inadequate drains. Outside the "modern" or western districts, the situation was even worse, and the narrow, unpaved "alleys" of the old city, the "khanjes," the "greater number of [these being] ... simply holes dug in the ground, occasionally lined with porous masonry, but never floored, and for the most part placed either entirely or in part within the buildings."

The nightsoil and other wastes that accumulated in this fashion (and, admittedly, in even less savory ways) were periodically removed by independent contractors, either by hand or by means of some very unpleasant machines, sold to the public baths, bakeries, and other fuel-using industries within the city where they were stored on the premises, dried, and then burned in the ovens.

There was never any real controversy about whether Cairo needed a better system; that was given. But the question of finance was another matter altogether. Had Isma'il installed a system before his bankruptcy, the medical history of Cairo might have been totally different, but once the country had reached the economic plight of the 1860s, this opportunity could not be recaptured. While the major obstacles to sanitation were undoubtedly financial, they were further complicated by the Capitulations, which placed tedious hurdles in the pathway of municipal reforms of all kinds. Here, then, a slight diversion is required to explain why Cairo was forced to wait until 1849 for a proper drainage system.

In a series of agreements with various European powers, the Sultan in Constantinople had granted to foreigners in the Ottoman domains virtual exemption from the laws and municipal regulations in large measure responsible for the "success" with which foreign nationals engaged in commercial ventures closed to natives. These Capitulations—which remained in force in Egypt until the end of the Ottoman Empire—provided that foreign consuls could be tried only in their own consular courts or, later, and only in certain cases, in the Mixed Tribunals that had been established in Egypt toward the end of Isma'il's reign. Furthermore, no laws, even those founded in the interests of the foreign communities themselves, had any binding power unless and until the foreign governments concerned gave their express consent. And, what was perhaps of greater importance in terms of municipal development, real estate taxes, special assessments, and any other techniques for raising funds for needed facilities could not be imposed on foreigners, despite the fact that the demand for amenities and modernization in Cairo came chiefly from these quarters.

The Scheherazade

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supplemented by later extensions and by the establishment of a parallel system at Jizan on the western bank, contributed to the provision of a healthier urban environment and thus to the increased chances of survival of the urban population.

While it is impossible again to separate precisely the portion of Cairo's growth attributable to increased rural-to-urban migration from the portion due to her improved potential for natural increase, some rough estimates may be offered here. In 1971, there had been some 29,575,882 Cairo residents, of whom 476,600 born outside the country. By 1972, these figures had increased to 35,691,834 respectively. Weighing these increments against a total population gain during the decade of 3,736,645, and cross-checking this against the estimated rate of natural increase, I conclude that, during this period of extremely rapid urban expansion, a little under half of the increase was due to an excess of births over deaths while the remainder was the result of net immigration to the city.

The city that most of the migrants arrived early in the interregional period helped to swell the increment due to natural increase.

The prosperous 1920s were succeeded by the depressed 1930s, in Egypt no less than in the rest of the world. Egypt experienced a severe economic depression, due to the huge drop in cotton prices, from which she had not fully recovered when the 1929 New York crash reverberated on the Egyptian stock exchange. In Egypt, as elsewhere, this economic state was rather directly reflected in a slower rate of population growth and a depressed rate of urbanization. In fact, it appeared to contemporary observers that Egypt's rate of population growth might actually be stabilizing at a maximum of 1.2 percent per year, since the death rate showed no signs of further decline. During the 1932-1937 decade, population increase was moderate, the total rising from 12,731,984 to 13,752,504 at the beginning of the period to 15,926,524 at the end. A somewhat similar situation prevailed within the city of Cairo. The momentum of the previous drop in the urban death rate appeared to have played itself out, and contributed to the creation of a healthier urban environment and to the increased chances of survival of the urban population.

It would be incorrect, however, to assume that migration accounted for all of this urban increase. As before, a substantial portion of the growth came from natural increase, the dynamics of which were changing radically. The stability of the death rate throughout the 1930's proved illusory, for with the return of prosperity came another decline in mortality rates that forced population up at the rate of about 1.8 percent per year. Cairo, due to her superior standard of living and health care and to the fact that the migrant population swelled the ranks of the descendent to 49 age groups, experienced an even higher rate of natural increase than did the remainder of the country. It is possible to estimate that, even in the total absence of in-migration, Cairo was capable of growing at the rate of at least 2 percent per year, solely from an excess of births over deaths. When one adds to this the immigration of several hundred thousand refugees, the net result was that approximately 55 percent had entered the city through migration.

As had been true during World War I, residential construction virtually ceased at the very time when the city's facilities were hottest. By 1949, the city's facilities were badly strained. Older quarters that had been fully built up and overcrowded even during the preceding decades became even more densely packed with inhabitants. The square-mile population increased 40 percent per square mile and higher in certain of the adjoining suburbs. Close to 50,000 persons were living in the cemetery zones alone. Peripheral areas which at the beginning of the war had been vacant or in agricultural use were converted to urban uses, and other built-up fringe sections doubled and tripled their populations. The prosperity brought about by the war was sustained into the postwar decade which saw construction undertaken on an unprecedented scale.

Population exceeded 2 million and had been growing at a rate close to 5 percent per year. It was inevitable that this enormous population growth not only led to astronomical densities within the older quarters but set in motion new urban expansions which totally transformed the outlying sections. Even before Cairo could begin to assimilate the increased population that had been her legacy from the war, the city faced with a new demographic crisis, the continued effects of which dominate the present era. The national death rate, which had shown only a small net decline during the preceding few decades, suddenly began a steep descent. Beginning with 1946-1947.
health conditions in Egypt experienced a notable improvement, the result not only of extended and better medical facilities but of the wider availability of new wonder drugs and insecticides. While infant mortality rates enjoyed the maximum impact, all age groups benefited from the decline. Cairo shared in this improvement if, indeed, it did not lead the way, experiencing a rapid decrease in its death rate from about 30/1000 in the mid-1940s to about half that rate by the mid-1950s. Since the crude birth rate remained impervious to change,\(^{46}\) this resulted in an even more rapid rate of natural increase than had been anticipated wartime. While migration from the rural areas declined somewhat (proportionately, although not absolutely) after the war, this was more than offset by the new demographic imbalance between births and deaths.

\(^{46}\) The effects of DDT, penicillin, and other antibiotics on the crude death rates in underdeveloped countries throughout the world since 1946 have been noted by numerous demographers. Thus, this phenomenon was not unique to Egypt but was worldwide in its impact. In general, a differential decline in death rates has been noted within these countries, favoring the population in the younger age groups over those in the older ages and favoring the urbanized population over that in rural areas.

\(^{40}\) Recorded crude birth rates for Cairo have actually been rising over the years; during the most recent period they have ranged between 95 and 95. Older deficiencies in reporting have been almost totally rectified, which accounts in part for the outstanding increase. It now appears unlikely that the crude birth rate was ever much less than 48, despite recorded rates in the low 40s. Part of the recent observed increase is real, however, even though it does not necessarily indicate greater fecundity. The crude birth rate should be used with caution since it is affected by the age and sex distribution of the population. For example, some increase in the crude birth rate—indeed of a fertility change—will appear when the sex ratio of the population changes from a heavy excess of males to a more balanced relationship between males and females, a change that has recently occurred in Cairo. At the beginning of the twentieth century, the city was weighted toward males. Since about 1925, the ratio has been equalizing, having been approximately 113 in 1947 and only 101 in 1960. In addition, one can expect a higher crude birth rate, \textit{ceteris paribus,} when a large percentage of the total population is in the childbearing years of life than when the population contains greater proportions of very young and/or very old persons. Thus, when the age distribution of the population changes, this can affect the crude birth rate without indicating a fertility increase. This change has also occurred in Cairo. The percentage of young adults to the total in Cairo has been increasing, just as the proportion has been diminishing in the rural parts of the country, due to the selective character of the rural-urban migration. Thus the observed increase in Cairo's recorded birth rate appears to be due to (1) improved and fuller reporting; (2) a shift to a more balanced ratio between the sexes, i.e., an increase in females; and (3) an increase in the percentage of the population in the childbearing years of life. It may be that very recently these factors have been supplemented by a drop in the age at marriage and an increased survival of embryos to full term, leading to a real increase in fertility and fecundity linked to economic advance.

Since 1947 Egypt's population has been growing by more than 3 percent per year, as compared to the world growth rate of about 2 percent per year. This resulted in a total population of over 26 million by the date of the Census of 1956 and about 33 to 35 million by 1970. Cairo's population has been expanding even faster. Since 1947 the number of city residents has increased by about 4 percent per year, yielding a 1960 total of close to 1/2 million.\(^{44}\) Cairo's population, as projected to 1970, reached 6 million, exclusive of the rapidly developing industrial suburbs of 7ahat to the west, Damietta to the south, and Matrouh to the north.\(^{45}\)

Of perhaps even greater significance is the fact that, unlike earlier decades, much of this growth has been unavoidable, since it came more from internal demographic potential than from migration. Of Cairo's growth between 1947 and 1960, at least three-fifths was due to an excess of births over deaths in the city itself, a phenomenon which shows no signs of diminishing. Even if the attempts of Egypt's planners to deflect migration streams from Cairo and channel them to other industrial centers are totally successful,\(^{46}\) this will curb only a small fraction of the city's anticipated increase. The excess of births over deaths within Cairo will be sufficient to sustain a growth rate of at least 3 percent per year, an increase impervious to migration controls and other devices of growth limitation. It is therefore safe to predict the continued growth of Cairo in the decades to come of a growth which, since it cannot be prevented, must at least be planned for.

The demographic and urban revolutions that began in Egypt during the nineteenth century but reached their strength only in the twentieth operated to concentrate within the capital city a population of several million persons, many of whom were actually newcomers to an urban way of life. However, over this period, Cairo's growth pattern was transformed from one in which the dominant—and indeed only—source was migration to one in which the major source of population increment has become natural increase.

Until the closing years of the last century, the increasing demands upon city resources imposed by the rapidly growing population could be met in demand for capital city residence a manner not dissimilar from that employed during earlier periods of expansion. Medieval Cairo, at the peak of its prosperity and grandeur, had contained almost as many residents as the 5 million people who lived in the city of 1876. And medieval Cairo, during the fourteenth century, had covered almost as extensive an area as that staked out for urban development by the end of the nineteenth century. Thus, while the character of parts of the city had changed markedly in the interim, the basic factors of supply and demand had not. Only with the fantastic expansion of demand in the twentieth century came problems that could not be solved within the framework of the older technological order. The revolutionary demands generated in the present century required a commensurate revolution in supply. Urban space—both horizontal and vertical—was required to accommodate millions of new urbanites, and modern facilities were required to permit the larger and infinitely more complex metropolis to function and survive.
The Increased Supply of Urban Land

As the expansion of Cairo during the Middle Ages was preceded by the recession of the Nile which made available new areas for development, so the twentieth-century expansion was also facilitated by the addition of land. But whereas nature had been the active agent in the former case, during the present century it was man, armed with a newly gained power over nature, who "created" the lands by making them accessible to the city and by draining or irrigating them—thus converting them into that precious commodity, urban land. This transformation was accomplished within a relatively brief moment in Cairo's long history, between about 1897 and 1917. Peripheral land to the north and northeast of the city had always been in existence but, as long as transportation was by human or animal means, such land lay beyond the limits of reasonable accessibility. Separated from the heart of the city by several hours of tedious travel, the land was suitable only for truck gardening and other nonurban uses. Once transportation links were forged that brought them within a hour or less of travel time from the city's core, these lands became sites of potential urban expansion.

Similarly, the land was the east of the city, its elevation on the plateau and foothills of the Mokattam range placed it above the valley floor and rendered it a useless desert. Urban expansion into this area—or indeed any settled habitation—was precluded by the character of the land rather than the location of the city. Only artificial irrigation could convert this land into a site for potential city growth.

If too little water prevented expansion to the east, its opposite hindered the setting of land to the west along the borders of the Nile. Up to the twentieth century, this land was still threatened by periodic flooding, existing structures to be confined to isolated high points in the terrain and consigning the bottom lands to winter cultivation. Until the fluctuations in the level of the Nile could be controlled with greater skill, this land also remained unavailable for urban growth.

Farther west, on the two islands formed in the center of the Nile (Rawdah and al-Fai'a), and on the fertile broad valley of the western bank, were additional lands not yet functionally related to the city. It was the distance of these lands from each other that prevented the city's expansion into these areas but the barrier of water. So long as access to the western bank could be gained only by wind- or muscle-driven ferries or over the single thin strand of bridgework built by Isma'il, these lands could not be developed as an integral part of Cairo.

Drought, flood, the rains, and the rivers, then, were the four forces which prevented Cairo's physical spread, which hemmed the city in at all compass points and confined urban development to the region already settled by the end of the nineteenth century. During the opening two decades of the twentieth century each of these barriers was stormed, leaving the surrounding terrain almost defenseless against the tide of urban expansion demanded by Cairo's population explosion. In the history of these campaigns is found the key to the modern ecological structure of metropolitan Cairo.

The only meaningful measure of distance in a city is the amount of time, effort, and expense required to travel from one point to another, anything that reduces these "costs" shrinks distance. In this sense, the nineteenth-century Cairo shriveled to less than a third of its original size (if, indeed, located at the opposite point of view, "tripled her area without increasing her size") within the two decades between 1896 and 1916. For in those twenty years a system of mass transit was installed which connected even the remotest points of the expanding city with the central core in a complex network upon which the present city is still heavily dependent.3

Cairo inaugurated its first electric tramline several years before New York City was to take advantage of this means of transportation. The initiative and the capital came from Europe, a phenomenon we shall note over and over again as we examine the technological changes that took place in Cairo in the early decades of the twentieth century. In December of 1894, the Baron Empain (better known in his capacity as the founder of the modern suburb of Heliopeólis) was granted a concession to establish a tramway system for the city of Cairo.

The following year he assigned this concession to a joint stock company which had been organized for that purpose by his fellow countrymen in Brussels. Funds were readily raised as European speculative capital was attracted to Egypt in anticipation of a boom. The original agreement had specified eight lines or routes, of which six were to radiate from the central terminal of Maydán al-'Arabah al-Khadri'ī at the southeast corner of the Al-Azharīya Gardens. Between 1896 and the opening month of 1898 all eight lines, having a total track length of 26 kilometers, were inaugurated. The aim of this initial system was to create an internal network linking important points within the built-up portion of the city, not to extend the boundaries of that area. This fact is seen clearly in a catalogue of the routes themselves.

The First Eight Tramlines in Cairo

**Date of Inauguration**

1. **Line from al-'Arabah al-Khadri'ī via August 1896***
   - Boulevard Muhammad 'Ali to the Maydán Muhammad 'Ab (the old Qurayn Appalila below the Citadel).
2. **Line from al-'Arabah al-Khadri'ī via August 1896***
   - Ghareb Bālīy (Bālīy) to the original Abū al-'Alâ Bridge over the Ismā'īlya Canal near the shore of the Nile at Bālīq.
3. **Line from al-'Arabah al-Khadri'ī via September 1896***
   - Ghareb 'Abdul 'Azzā to Bīb al-Lāq and from there south to the Nāfi'īya (pond) section.
4. **Line from al-'Arabah al-Khadri'ī via September 1896***
   - Ghareb Cūt-Bey north to al-Fajīlāh and then eastward to 'Abdīsīyā.
5. **Line from al-'Arabah al-Khadri'ī via December 1896***
   - southwest to Bīb al-Lāq and from there to the Qarṣ al-'Ayīn in Ashqānīyah.
6. **Line from al-'Arabah al-Khadri'ī via December 1896***
   - Ghareb Cūt-Bey to the railway station at Bīb al-Hādīlī.
7. **An extension of Line 5 (above) from December 1896***
   - the Qarṣ al-'Ayīn southward to Mīr al-Qadīmān.
8. **An extension of Line 4 (above) from January 1897***
   - 'Abdīsīyā westward to the railway.

8. A number of sources have been consulted to build up a comprehensive description of Cairo's evolving transport system as presented in this chapter. Among the more valuable are Clegern, Le Caire, its particularly the table compiled from the transit records that appear in pp. 105-108, and which has been adapted for use here; Peltier, D'environ (McGraw Hill Press: Cairo: 1956), 106-109; Buriel, Les tramways du Caire en 1939 (Imprimerie Barbery, Cairo: 1939); and several chapters in Moustafa Nafzī, al-Dībājī, Derbi Khodjaīyā f. al-Muṣawīs wa al-NAFZI wa al-Muṣawīs [Cairo: Planning Studies in Traffic, Transport and Communications] (Anglo-Egyptian Library, Cairo: 1959-1960).

73. Ceremonial cutting of the dike to the Khāli ca. 1800
The reader will recall the long history of the Khâlim. The canal connecting the Nile with the Red Sea had first been dug in the days of the pharaohs; it had been reopened by Trajan during Roman times and had been reactivated by ʿAmr after the Arab conquest. But gradually it ceased to be a link with the Red Sea and was reduced in function to irrigating the northern outskirts of Cairo and providing water to the city. Its ceremonial importance, however, exceeded its functional significance. For untold centuries (certainly predating the Arabs), religious ceremonies and great festivities had attended the annual cutting of the dikes of the Khâlim at Cairo. (At first, when the water level was higher, the canal was navigable all year and the flood stage was marked by construction of a dike. Later, as the land dried, this procedure was reversed, with the dike opened at flood time.) By this ceremony the head of the Egyptian state signaled to the entire Delta the moment after which the Nile’s replenishing flow could be released over the parched earth. But, little by little, the Khâlim was diverted of its functions and, with the introduction of perennial irrigation, even its ceremonial importance was undermined. On the other hand, increased desiccation had changed the canal into an unattractive and dangerous source of infection. The time was ripe for it to be filled.

In 1892 the Tramway Company agreed to compensate the city for converting the ancient canal bed into a level and wide thoroughfare and to construct a tramline along its entire length from Zâhir (Mosque of Baybars I), north of al-Husayniyyah, to its bend at Sayyâdah Zaynab (near the site of the seven water wheels of early history). Filling began the following year. By the summer of 1900 the course which had once carried white-sailed boats was being noisy traversed by rattle-trellies, horse-drawn victorias, donkey-drawn carts and carriages, camels, and even water buffaloes being driven to the abattoirs south of Sayyâdah Zaynab. At last Cairo had a centrally located north-south thoroughfare extending almost the entire length of the city.

Many of the other tramlines opened during the first decade of the twentieth century stretched out beyond the city proper, for the first time making peripheral sections accessible to the city’s center. The first of these was the line constructed between the Quar al-Nil Bridge and the pyramids along the route laid out by Isâtâl just prior to the opening of the Suez Canal. Next came a tentacle of the system extending north of the city into Shubra along the route established by Muhammad ʿAli, the Shârî Shubra. One branch of this was later extended westward into the Rawl al-Farraj section at the Nile north of Bûliaq, while another extension carried the line all the way to the village of Shubra farther north. By 1907 many of the peripheral areas north and northeast of the city destined to become populous quarters had been brought within reach of urban expansion by the new tramlines.

**Tramlines Added Between 1899 and 1907**

<table>
<thead>
<tr>
<th>Description of Route</th>
<th>Date of Inauguration</th>
<th>Portion opened in September 1899, remained in August 1900</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the west bank of the Nile to the pyramids of the ancient city of Memphis</td>
<td>9. From the Quar al-Nil Bridge (March 1902)</td>
<td>North to the pyramids and the new Mena House Hotel, on the west bank of the Nile</td>
</tr>
<tr>
<td>Line extending from Sayyâdah Zaynab (new filled) to Sayyâdah Zaynab (near the site of the seven water wheels of early history)</td>
<td>10. From the Quar al-Nil Bridge (June 1903)</td>
<td>South along the old bed of the Khâlim Mîry (name filled) to Sayyâdah Zaynab</td>
</tr>
<tr>
<td>From the Port Limon near the May 1902 Bib al-Haddîl railroad station westward along the Isâtâl Canal and then south to Munsîr at the Quar al-Nil barracks at the Nile</td>
<td>11. From the Quar al-Nil Bridge (May 1903)</td>
<td>North along the east side of the Isâtâl Canal to the north of the city</td>
</tr>
<tr>
<td>From the Bib al-Haddîl railroad station due northward along Shârî Shubra and thence to Shihâl Rawd al-Ḥârij</td>
<td>12. From the Bib al-Haddîl railroad station (August 1903)</td>
<td>North along the east side of the Isâtâl Canal to the north of the city</td>
</tr>
<tr>
<td>A small connecting loop between October 1903 al-ʿAbdâb al-Khârij and the eastern side of the Isâtâl Canal through the Mixed Courts Buildings</td>
<td>13. From the Bib al-Haddîl railroad station (August 1903)</td>
<td>South along the east side of the Isâtâl Canal to the north of the city</td>
</tr>
<tr>
<td>From the Trade School in northern February 1907 Bûliaq due north along Shârî Abû al-ʿAlî al-Ḥârij to Rawl al-Farraj</td>
<td>14. From the Bib al-Haddîl railroad station (August 1903)</td>
<td>North along the east side of the Isâtâl Canal to the north of the city</td>
</tr>
<tr>
<td>From the Bib al-Haddîl railroad March 1907 station to the industrial quarter of Sabtiyah in northern Bûliaq</td>
<td>15. From the Bib al-Haddîl railroad station (August 1903)</td>
<td>North along the east side of the Isâtâl Canal to the north of the city</td>
</tr>
<tr>
<td>Extension of Line No. 15, north to May 1907 ward along Shârî Shubra to the outlying village of Shubra al-Khaymah</td>
<td>16. From the Bib al-Haddîl railroad station (August 1903)</td>
<td>North along the east side of the Isâtâl Canal to the north of the city</td>
</tr>
</tbody>
</table>

**XIV. Extension of the electric tramway lines of Cairo, 1899-1917**

As can be seen from the table and from Map XIV opposite, while a few of these newly inaugurated lines were directed toward the elaboration of the interior circulation system, five of them (Nos. 9, 12, 14, 15, and 17) pierced deep into the surrounding countryside. And wherever the tramlines blazed a trail the land speculators followed with predatory greed. Astute financiers, many of them foreign, recognized that the city’s form was about to be revolu-

et Saʿîd Street, today’s widened thoroughfare, follows the ay of the Khâlim canal and street
bedouins encamped. Within five minutes one could catch the tram that left from the Mosque of Baybars (at the time of Napoleon isolated amidst cornfields, now the heart of the well-populated district of Zahiri) for Sayyidah Zaynab and the slaughterhouses beyond, traveling along the course of the old Khalji Maṣrī. Every six minutes trams served the growing suburbs of Shubra and Rawd al-Faraj on the north. Only the west bank of the river remained relatively inaccessible; the single line between the Qâr al-Nil Bridge and the pyramids carried only one car every twenty to thirty minutes.6

Final Additions to the Tram System, 1908-1917

Date of inauguration
18. Line connecting Jizah on the west to March 1908 en route with Mir al-Qasimiah via the new bridge (see below).
21. Along Shari‘ al-Fajjālāh to the Between January 1911 Maydān (Karacod) near Bīb al-Aṣghar 1911 Hafid and then northeast to Saktā- and kīnī.
22. Connection between Sayyidah Zaynab June 1911 and Nūrīyah.
23. Sayyidah Zaynab southward to the September 1911 September of that period assured its readers of Cairo’s abutments.
24. From Būlāq over the new bridge to July 1912 the Jazirah.
25. Between the two western bridges October 1912 on the Jazirah.
27. Connection between the Jazirah March 1913 and the village of Imāhāh on the western bank via the Zamälik Bridge.
28. Extension of the northern line to November 1913 Rawd al-Faraj and Shībail Rawd al- Faraj.
29. Line from the Citadel southward December 1916 into al-Khalīfah cemetery as far as the Tomb of Imām Shāfi‘ī.
30. Southern extension from Mir al-September 1917 Qasimiah to outlying Aṭār al- Nabi.

The process was one very familiar to students of urban land economics, one which has been replicated in every Western city under similar circumstances, and one which still continues, although superhighways have now superceded streetcar lines as the stimulus. It is significant to note that speculation began well in advance of a population growth that would have permitted urban development of all lands taken out of agriculture. Land was simply held vacant, even including plots in the central portion of the city, in anticipation of future gains. In the 1940s decade that followed, the character of land use began to change; wholesale and storage warehouses gravitated northward from Būlāq into the Shībail Rawd al-Faraj (as the former port at Būlāq was relocated farther north), casinos and resorts were established at the end of lines, and “speculator” houses were jerry-built along the northeast axis toward and beyond ‘Abbāsīyah. Other lines were soon added, either to fill in the interior network or to reach across the river over the series of new bridges that had been constructed. By 1911, 98 kilometers of tramlines were in use, over which rolled some 875 trolleys serving about 95,700,000 passenger-fares yearly.7 Thus, in the brief span of only fifteen years, Cairo had become a mass transit city. The Baedeker edition of that period assured its readers of Cairo’s ubiquitous and convenient system of transportation. By that time, one could travel between al-‘Atabah and Mi‘rāl al-Qudmīah in less than forty minutes on tramcars that passed every six or seven minutes. This was the trip that had taken several hours over a dusty donkey path less than fifty years earlier! At twelve-minute intervals a tram ran between the Sporting Club on the Jazirah, the Arbabānīyah Gardens in the heart of “downtown,” and the Citadel—a journey which, again, had required several hours and several modes of transportation in earlier days. Every three minutes a tram was dispatched from al-Atabah al-Khadrīa to the railway station and, from there, to ‘Abbāsīyah, once the desert outpost near which figures on rolling stock and passenger-fares used throughout have been assembled from various issues of Annuaire Statistique, issued biennially until 1960-1961 by the Government of Egypt, Department of Statistics and Census. See issues of 1914 as well as later editions.


82. The Shari‘ al-Azhar shortly after it was opened
were desecrated plateau lands which prevented the city's expansion in that direction. Up to 1925, only one attempt had been made to crash through the desert barrier and that attempt, a prototype for all to come later, resulted in the creation in Cairo of Mosul's most impressive suburb, Helioptolis. Its development was intimately tied to the expansion of the mass transit system in Cairo.

In 1906, the Tramway Company obtained a concession for an extension of the 'Abdīyah line to the suburban villages of 'Ain Shams and Maṭrūḥiyah in return for 5,000 shares in the newly organized Miṣr and 'Ain Šams Oxy's Electric Railway Company. It was an exchange it never needed to regret. The latter company contemplated a scheme so unique at the time that, had it ever been in order, it could easily have been dismissed as "Baron Empain's folly." The plan was to construct a new Cairo (Miṣr al-Jadīdah) on the desert plains northeast and quite beyond 'Abdīyah.

Helioptolis was to be a garden satellite town designed in the latest manner of British town planning, but it would have been impossible to find a site less garden-like in its original state! In May of 1905 the Oxy's Company obtained a license from the Egyptian government to build its city and received permission to purchase the valuable desert lands at the nominal price of one Egyptian pound per acre. Within the first few years of its existence, the company exercised its option on almost 6,000 acres, but without capital an investment on that pressure scale this land was not even worth its bargain price. Not only did the new area require extensive irrigation, but a full complement of municipal services—roads, water lines, sewers, electricity and other site improvements—was needed to convert the raw land to urban use. As in the case of the transportation system, the capital came from European sources. By 1906 the capitalized value of the company's ownership was upwards of 15 million francs. Five years later, when the operation was

To the east of the city, outlining the fanning Delta,

*See Annuaire Statistique. In 1905, prior to the completion of the last few lines, the length of tram tracks was 63 kilometers, a figure increased to 65 by 1917. Later, the figure remained constant until the addition of the lines on Shari' al-Anbar and Shari' al-Jawzi, in 1931. By then the tractions had increased to 71 kilometers; the present length is 70 kilometers. In various issues of Annuaire Statistique, figures are also given concerning rolling stock and passenger traffic. From these we learn that by 1910 the number of trams had reached 496, a stock which was preserved unchanged until the 1920s. We also see the impact that Cairo's rising population had on the use of this stock. In 1937, 50,496,000 passenger rides were recorded. This was increased to 82,703,000 passengers by 1930 and, with only a small increment to rolling stock, to 53,245,000 five years later.

was beginning to show tangible results, some 50 million francs had been invested. Even a well-designed and improved city could not exist, however, without a life line to the economic heart of Cairo. Rapid transit connections between the dormitory suburb and the city were essential. The tramline along the northeast axis had already been extended as far as 'Abdīyah, but there was as yet no means for continuing the journey beyond the outlying site of Helioptolis. As part of the initial concession, the Oxy's Company had agreed to construct and equip an electric street railroad (Metro) which would serve its new community. By 1908 the outermost portion of this line was already in operation, connecting the new city with the terminus of the tram tracks at 'Abdīyah. In the following year another line was inaugurated to link Miṣr al-Jadīdah with the other outlying suburban community of al-Qubbah, where the residential palace of the Khedive was located. In 1910, the system was completed by an extension which continued the Miṣr al-Jadīdah-'Abdīyah line all the way to the terminus at Pont Léon's station, just across the Ismailiyah Canal from the rail terminal of Bib al-Hadīf. Other feeders carried traffic into the very heart of the city, although these have since been removed. It was this transportation link which permitted the growth of Helioptolis and which resulted, much later, in a continuous band of urban settlement stretching all the way from 'Abdīyah to Helioptolis and beyond. The gigantic gamble undertaken in the opening decade of the twentieth century by a Belgian "robber" Baron recompensed its foreign investors beyond their wildest hopes.

Some indication of the venture's success is that by 1917 the suburb in the desert contained a resident population of almost 50,000 persons and new houses more than twice that number. Nor is it any longer a mere dormitory suburb. Close by are three airports, extensive military installations, and numerous factories offering local employment. In addition, an important secondary government location is located within the town itself as well as a fairly self-sufficient central business district. While large numbers of its residents still commute the half-hour to Cairo, the community has gradually taken on many qualities of the satellite town initially envisaged by its founders.

Thus, within the opening two decades of the twentieth century the desert barrier had been pierced, although admittedly the single breach at Helioptolis was far from

* By 1914, 24 kilometers of Metro lines were in operation. After that date, only 3 kilometers of feeder lines were added, the maximum being reached about 1930. After that, the extent of tractions was reduced to 21 kilometers, its present length. See Annuaire Statistique, various issues from 1934 et seq.

64. Bib al-Hadid railway station about 1920. Note Jār Shubera to left of station

65. Widened Shari' Ramses in front of Bib al-Hadid station in the early 1960's

66. Aerial view of the train station, the metro terminus, and Shari' Ramses
THE MODERN ERA

a decisive victory. It proved, however, that expansion into the desert was feasible and economic; further conquests required merely the stimulation of demand.

These were also the decades during which Cairo conquered the barrier which the Nile had always presented. Although the opening skirmishes had taken place in the nineteenth century, when Ismail inaugurated the first iron bridge of Cairo-Nil, it was not until the first years of the twentieth century that the city was able to break through the riverine barrier sufficiently to permit urban expansion across the river-margin land, of the islands in the middle of the river, and of the agricultural land on the western bank.

The decisive "battle of the Nile" was not fought at Cairo but more than 900 miles upstream at the cataract above the small province of the tow of Aswán, not far from the Sudanese border. In February of 1868 a group of British financiers combined to underwrite the costs of constructing a dam and reservoir at that site, engaging the firm of Sir John Arrol and Company to execute the massive engineering project. By December of 1892 a dam, a mile and a quarter in length and capable of maintaining a 55-foot head of impounded water, was dedicated and placed in operation.13 This low Aswán Dam with its associated reservoir gave Egypt some measure of control over the river at whose mercy she had existed since earliest recorded history. During the late summer flood and the winter months, the reservoir stored the excess water which formerly had roared and eddied downstream, overflowing the banks before being lost finally into the Mediterranean. These impounded waters could be released during the drought months of late spring and early summer to maintain a water supply for year-round cultivation in the Delta. While this was the major purpose of the dam, one side effect of this impounding in flood was damage on both margins of the river. Once the banks of the river had been stabilized it became possible to develop them more intensively and also to throw bridges across from one firm shore to the other. It is therefore not accidental that the year 1903, which marks the inauguration of the first dam at Aswán, also marks the initiation of plans for several bridges spanning the turned waterway. Three bridges began in that year which were completed and opened for traffic in 1897. These were the 'Abbāh Bridge, 535 meters long and stretching between the western edge of the island of Rawdah and the west bank of the Nile at Jizrah; the Malik al-Salih Bridge, spanning the short distance between the eastern edge of Rawdah and Mīr al-Qadīm; and the Mūhammad Mūsā Bridge, connecting the Qasr al-Ayyun with the northern tip of Rawdah. These bridges created a southern route to supplement the central connection originally achieved in 1872 by the Qasr al-Nil Bridge and its extension across the Jazirah. The dam at Aswán, hailed at the start of the century as the "final" solution, soon proved inadequate for the task assigned to it and, in 1909, over the protests of concerned archaeologists, plans were made to heighten the crest to increase its storage capacity, a scheme finally completed by 1912. Following this new heightening a third bridge connection between the eastern and western banks at Cairo was added, this time to the north of the existing bridge at Qasr al-Nil. In 1908 work began on the Abd al-'Alī Bridge connecting Bnilq with the northern half of the Jazirah, a span some 214 meters in length. By 1912, this bridge (now known as the 26th of July Bridge) and its western extension to Imbālib (called the Zamāni Bridge) were both completed and opened to wheeled and tramway traffic. Two years later, the older Jālī Bridge (western extension of the Qasr al-Nil Bridge) was widened and placed by a wider and sounder structure. With these final additions, the bridge building phase came to a halt temporarily.14

Thus, by 1914, there were three alternative routes connecting the banks of the river, two using the Jazirah as a stepping stone to link east and west at the northern and central sections of the city, the third employing the island of Rawdah to connect the north and south. During the drought months of late spring and early summer to maintain a water supply for year-round cultivation in the Delta. While this was the major purpose of the dam, one side effect of this impounding in flood was damage on both margins of the river. Once the banks of the river had been stabilized it became possible to develop them more intensively and also to throw bridges across from one firm shore to the other. It is therefore not accidental that the year 1903, which marks the inauguration of the first dam at Aswán, also marks the initiation of plans for several bridges spanning the turned waterway. Three bridges began in that year which were completed and opened for traffic in 1897. These were the 'Abbāh Bridge, 535 meters long and stretching between the western edge of the island of Rawdah and the west bank of the Nile at Jizrah; the Malik al-Salih Bridge, spanning the short distance between the eastern edge of Rawdah and Mīr al-Qadīm; and the Mūhammad Mūsā Bridge, connecting the Qasr al-Ayyun with the northern tip of Rawdah. These bridges created a southern route to supplement the central connection originally achieved in 1872 by the Qasr al-Nil Bridge and its extension across the Jazirah. The dam at Aswán, hailed at the start of the century as the "final" solution, soon proved inadequate for the task assigned to it and, in 1909, over the protests of concerned archaeologists, plans were made to heighten the crest to increase its storage capacity, a scheme finally completed by 1912. Following this new heightening a third bridge connection between the eastern and western banks at Cairo was added, this time to the north of the existing bridge at Qasr al-Nil. In 1908 work began on the Abd al-'Alī Bridge connecting Bnilq with the northern half of the Jazirah, a span some 214 meters in length. By 1912, this bridge (now known as the 26th of July Bridge) and its western extension to Imbālib (called the Zamāni Bridge) were both completed and opened to wheeled and tramway traffic. Two years later, the older Jālī Bridge (western extension of the Qasr al-Nil Bridge) was widened and placed by a wider and sounder structure. With these final additions, the bridge building phase came to a halt temporarily.14

13 Omitted from this discussion is the long and varied history of the railway bridge of Imbālib, designed to carry rail traffic between the Delta line terminus at Bnil al-Qadı̄m on the eastern bank and the Upper Egyptian line terminus at Imbālib on the western bank. This bridge had first been undertaken in 1889 and completed in 1892. It was demolished in 1898 and then replaced by a more modern structure. Also, in 1933, the Qasr al-Nil Bridge replacement project was undertaken and opened for traffic while Imbālib structure was simultaneously demolished. Neither of these affected the basic transportation connections in the city.

14 Increased supply of urban land. In the nineteenth century as well as earlier, the predominant land use found along both shores and on the islands within the Nile was royal. Here were scattered the numerous palaces of a large ruling family, interspersed by gardens, plantations, and orchards. Particularly at the time of Ismail's these areas had received preferential development. By 1857 the following were located on the east shore southward from Bnilq: (1) the barracks of Qasr al-Nil, originally constructed by Sa'id; (2) the palaces of Ismailiyah and Dihribarah, surrounded by their gardens, in the general area known as Qasr al-Dihribarah extending between the street leading to the Qasr al-Nil Bridge on the north and the Shībī Dihribarah on the south; (3) the plantations north of and associated with the two palaces of the Queen Mother and the older palace built by Muhammad 'Ali's son, Ibrāhīm, al-Qasr al-'Ali; (4) vacant land which had been ceded to the Water Company for its pumping station but abandoned after the pumping station was relocated near Bnilq; and finally (5) the Qasr al-Ayyun of Muhammad 'Ali, which had been serving as a military and public hospital for many decades.

On the Jazirah opposite Bnilq there was the palace which Ismail had built just prior to the opening of the Qasr al-Nil Canal and, north of it, the gardens designed and executed by Barillet-Deschamps. In 1880, when Ismail's creditors claimed many of his possessions, the palace itself had been transferred to a hotel chain and the restaurant transformed into the luxurious Jazirah Palace Hotel, rival to the famous Shepheard's and under the same management. (After a generation as a private residence, it has recently been converted back to a hotel, the 'Umar Khayyam.) Around the palace lay the race course, polo fields, and gardens which became the elite Khedivial Sporting Club (now known as the Jazirah Club), while to the west of the palace Ismail's family land opened to the public as an aquarium and park in 1912. Circling the island was a shaded carriageway which had displaced Shībī Shubrah as the favored promenade of the fashionable.

On the island of Bnilq to its south the uses remained a strange combination of rural and regal. At the southern end was a park belonging to the heirs of 'Abd al-‘Azīz and the ancient Nilmeter; in the northern and eastern parts of the island were several royal family palaces and the remains of Ibrāhīm's famous botanical forest. Intervening were small rural settlements (including the village of Manzal) in which a peasant class which cultivated the island.

On the western bank of the Nile was a similar composition of uses. The villages of Imbālib, Mīt Kardak, Mīt 'Uqbah and their surrounding fields and 'adab (feudal settlements) preempted the northern portion.
Development of Garden City, however, took place only gradually, since the economic crisis of 1927 and the deflationary speculative demand which followed inhibited the construction of many of the homes planned for the area. By the World War I period, although streets had been laid out all the way from Qasr al-Dubbârah south to the Qasr al-Ayni Hospital and although several intervening palaces had been demolished, there were only a handful of elaborate villas sprinkled over the extensive quarter. Not until the more prosperous 1930’s did the area begin to fill in, and not until the even more active 1940’s and 1950’s were these villas replaced by the tall apartment homes which now predominate in the quarter.

Developments in the Jâtîrah date from the same era of speculative expansion. Between 1905 and 1907 the Barbier Society purchased and subdivided the portion of the island north of the Jâtîrah Palace Hotel. Houses were constructed on the lots closest to the center of the island, while more peripherally located sites were held vacant or still farmed in anticipation of future demand. What was true of the Jâtîrah was even more typical of the western bank of the Nile. Here, speculators had purchased all lands not usurped by the royal domains or tied up in waqf but, except for the very narrow strip between the river and the major transeits which contained a string of elegant homes, only spotty building gave evidence of fulfilled promise.

Thus by the end of the second decade, all the barriers which had prevented the city’s expansion before the twentieth century (except the still-extant khârâb south of the major nucleus) had been methodically demolished. Distance had been compressed by mass transit; the desert had, in places at least, been irrigated and developed; bridges spanned the river at three important points, bringing the islands and the west bank into the potential circumference of the city; and drainage and flood control had made possible the subdivision and sale of lands bordering the no-longer capricious river.

These lands had been added to the city’s supply during an era of unprecedented foreign investment, real estate speculation, and unguarded optimism concerning Egypt’s economic future and her secure position as a British colony, in fact if not in name. The tremendous population boom experienced in the 1920’s had not yet occurred. Nor was it then predictable that by 1932 Egypt would gain some greater measure of autonomy under a constitutional monarchy. Nor could the world-wide depression which inhibited urban growth during the decade of the ’20’s have been predicted during the revolutionary opening decades of the twentieth century.

All these events were yet to come. The evolution of every quarter of the city was to be affected differentially by them, but it is important to note that without the new urban framework established between 1870 and 1917 none of these developments would have taken the form they did. Later we shall trace the evolution of each of the quarters to show how both supply and demand interacted to yield the particular ecological pattern of contemporary Cairo. However, before proceeding to this final section, we might summarize some of the problems of urban growth and control as they evolved during the modern era, indicating which of the problems inherited from the past had been solved during the nineteenth and early twentieth centuries, which residual difficulties persisted into the modern era, and what new kinds of problems were created by the process of modernization.
Urban Problems: Old, Persistent, and New

By 1917 Cairo was prepared to embark upon a new phase of development and urban planning that would put it into a more prosaic but certainly more familiar model of a modern metropolis. The groundwork for this transformation had been laid during the nineteenth century and the opening decades of the twentieth. Within that span of time many of the older problems that had been her legacy from medieval and Turkish times had, in large measure, been solved. A significant few, however, still persisted or intensified, necessitating a re-evaluation of the city's history.

Most of the problems resolved by the early twentieth century may be classified as physical and technological, rather than social or institutional. The preceding chapters have explored in some detail the physical advances made in the critical century between the latter decades of Muhammad 'Ali's reign and the opening years of World War I. Thus, only a very brief recapitulation is necessary.

Among the earliest improvements were the removal of most of the rubbish mounds that had surrounded the city (all but those in the vicinity of Old Cairo and on the eastern bankers of the walled city) and the successive filling of the numerous ‘braks’ and marshlands that had constituted major barriers to the expansion of the city. This was followed by a stabilization of the banks of the Nile at Cairo, a process which although it began in the 1860s was not completed until the opening of the first low dam at Aswan in 1902, and not fully perfected until the subsequent heightening of that dam in 1909-1912 and, again, in the early 1930s.

A road system in many new sections of the city had been substantially achieved by the early twentieth century. The planning of the Al-Imālīyya quarter, the Fajjalīsh section and the area of Tawfiqiyah, followed by similar innovations on the Jazār, along the banks of the Nile in Qar al-Dibibrah and Garden City, as well as on the Jizāl side, and culminating in the subdivision of the northern ghauts into Shorstah, Sakhtah, and extending to ‘Abbiyyah, Qubbah, Mattārāyah, Zayyān, and Mīr al-Jāblah on the northeast—these all represent a “final” solution to the old problem of space. The solution was facilitated by major technological innovations in the form of bridges and, most important, a network of electric tramlines that threaded the newer districts and joined each to the city's center.

Not only had the city successfully coped with the problems of space and accessibility, but by 1917 a safe and relatively sanitary urban environment—notoriously absent as late as the nineteenth century—had been achieved, even though much room for improvement remained.

While the political stability attained during the Muhammad ‘Ali era must be credited with having initiated this process, the safer environment could not have been created without the institutional innovations of hospitals and clinics, the regulatory innovations in the field of public health, and, finally, the physical addition of the drainage-sewage system for the city. Although there were areas in which inadequate efforts had been made and although only a relatively tiny proportion of the national budget was still allocated to these ends, the facts remain that, even with the minimal and inexpensive means employed, Cairo by 1917 had become an infinitely safer place to live in than it had been and live than she had been a scant fifty years earlier.

While most of the solved problems may be classified as “physical,” most of the yet unsolved ones were to be found in the social, economic, and institutional aspects of urbanization. Although some small beginnings had been made in ameliorating these remaining impediments to modern development, their ultimate solutions lay in the future. Perhaps the most basic unsolved problem was the most ancient. Egypt, on the eve of World War I, still lacked political autonomy and was still governed essentially by an alien elite, even though its nature had altered significantly since the days of the Mamluks. As we have seen, this situation was scarcely initiated by the British occupation of 1882 which, rather, must be viewed merely as a culminating continuation— albeit different in kind as well as degree—of the pattern which for centuries had separated governmental and social decision-making from the indigenous population.

The problem of political autonomy had once come close to solution. The military exploits of Muhammad 'Ali and 'Abd al-'Azīz Pasha had been attempts to establish Egypt's independent status vis-à-vis the Ottoman Sultanate, but they were foiled by European intervention in 1840-1841. Thereafter, fiscal rather than forceful means were employed to the same end, particularly by Ismail, in an effort to extract in piecemeal concessions what had been denied in principle and in toto. The latter was clearly "purchased" from the Porte, however, was ceded to the British Consul General after 1878, so that little net gain could be recorded. Ironically, Egypt's declaration of independence from Constantinople came in 1914 with the unilateral British creation of a protectorate status for Egypt—a step which was an inevitable consequence of the state of war existing between the two "partners" in Egypt's rule. Thus, while autonomy was theoretically achieved, self-government by native Egyptians remained if anything an even more remote possibility.

Self-government and the elimination of alien elements from the control of national affairs, however, were becoming the goals of an increasingly articulate Egyptian nationalist movement. It is certainly beyond the scope and requirements of the present study to trace the development of this movement from its modern beginnings during the second half of the nineteenth century. We need merely note that many decades of preparation and built-up pressures lay behind the "crisis point" which was reached at the end of World War I, when Egyptian nationalist leaders claimed the concessions they believed Britain had promised to grant once hostilities ended. The formation of the Wafd by Sayyid Qa'ābi, the frustrations that exploded into the national strike of 1919, the "investigating committee" appointed by Great Britain, the initiation, breaking-off, and reactivation of negotiations—these are merely some of the landmarks in the crisis that led to the British declaration officially terminating the protectorate and recognizing the status of Egypt as an independent sovereign State.

Not that the establishment of an independent political entity indicated the fulfillment of nationalist demands or aspirations. While the agreement of 1922 opened the way for a constitution (1923) and a good measure of de jure independence, the continued presence on Egyptian soil of a substantial British military force (one of the rights reserved in the agreement) tended to detract from the "voluntary" nature of the declaration. Political autonomy, in other words, was not achieved by consent, within specified municipalities—Britain neither desired nor sought a basic modification of the Mixed Courts system. It was not until the Convention of Montreux in 1937, whose success the British had "guaranteed" in the treaty of the preceding year, that the concessions under the Capitulations were finally abolished and Egyptians lost some of their last-sacred privileges within in Egypt. However, even this did not lead to an immediate disbanding of the Mixed Courts, since a transition period of twelve years was allowed which delayed the establishment of a single-standard unified judicial system in Egypt until 1949.

Not only were the aims outlined above were two additional institutional difficulties that still beset Cairo in 1917 and were not to be solved so easily. One was the lack of home rule (that is, municipal status with its attendant power to finance locally determined improve-
THE MODERN ERA

ments from an independent budget) and local representa-
tive government through which local aspirations could be translated into action. The other was the lack of local institutions for financing private urban developments on a modern scale. Each of these requires more detailed analysis.

It is not to be assumed that the issue of local government has not the emotional commitment in many parts of the Orient that it has in the West. While in Europe local administrations often preceded—and jeal-
ously guarded the establishment of a central or national government, the process was generally the reverse elsewhere. Certainly, in Egypt the central administration always took precedence and local subdi-
visions were created primarily for the purpose of ensuring the execution of policies that had already been determined.

Cairo, as the capital city, was in an even more anomalous situation than most other local communities. Al-
though since Mamluk times at least she had always been administered by special city officials—a quasi-military governor subordinate to the ruling House, a chief security officer, and at least two qa'ids (one for al-Qahira, the other for Misr)—the practice a separation between local and national politics was hardly feasible. To control the capital was, in fact, to control the country. And the converse was so compelling that the security of the capital always became the critical issue during the power strug-
gles that recurred regularly throughout the centuries. It was perhaps due to this fact that, even after other local communities in Egypt began to enjoy a greater degree of autonomy and home rule, Cairo was consciously excluded from their ranks.

It is conventional to attribute the inauguration of a modified system of decentralized government in Egypt to the passage of the First Organic Law. In actuality, however, the administrative subdivisions utilized in this system had been delimited in 1870 by Muhammad 'Ali in accordance with a reorganization that was taking place throughout the Ottoman empire. Furthermore, the British administration continued to use their newly estab-
lished provincial councils not to initiate policies (which had been their ostensible purpose in the law) but, rather, in the same manner in which their predecessor-institu-
tions had been used, i.e., chiefly as agents of execution. Even before passage of the Organic Law, however, the foreign communities in several Egyptian cities had seeded the ground for local government. As in the medieval cities of Europe, the pressures toward self-government were "burgher" in their origins and "commercial" in their motivations. Thus, in 1859, the cotton export mer-
chants of Alexandria agreed to contribute taxes or, more accurately, to pay assessments to improve the road be-

between Miniat al-Basîl and the port, the venture the government helped to support by an annual subsidy. This project was originally granted a charter in 1858 and was finally succeeded in 1890 by a municipality (Baladiyya), the first to be established in Egypt. While merchants in other communities also appear to have made some efforts in a similar direction, the practical difficulties involved in setting up a municipal structure, which in the case of Alexandria had required the signature of all Capitulatory Powers, were sufficient to guarantee Alexan-
dria's un qualified priority to the other.

In that year, the Minister of Interior authorized nine cities to form local commissions for the purpose of planning municipal improvements that were to be financed by subscriptions from the national government. These "local governments" were to confine their activities, however, to apothecary housekeeping functions, such as arranging for the installation of water and electrical systems, overseeing the maintenance and cleaning of streets and public gardens, regulating public facilities, and the like. Eleven more communities were added to their ranks in the next three years. However, the uncertainties of planning for even these minimal services without some guaranteed form of locally raised revenues, coupled with the legal impossibility of collecting taxes from foreigners, were problems unsolved in the local commission. The Local Mixed Commission, in which there were no civil servants, had been created in return for their voluntary com-

pliance with local taxation, was initially set up in 1876 in Manshi'ah as a way out of this dilemma, and other com-
munities with powerful foreign minorities were quick to connect to this new form.

By 1908, three dozen Egyptian cities had local or mixed commissions—but Cairo was still causally absent from their number. Despite the reforms of 1897 and the granting of municipal organizations to nineteen communities under this system by 1912, 1921, and even in more than the years that followed, Cairo's name does not appear on the list. Even the Constitution of 1923, which established the provinces, cities, and villages of Egypt as juridical personalities and enabled the enactment of several local government laws,4 did not lead to the establishment of a separate municipal charter for Cairo.

In fact, it was not until 1939 (Law 145) that the Municipality of Cairo was created, as distinct from the provincial government. Since then there has been a total reorganization of the system of local government in the United Arab Republic, as promulgated in Law 134 of 1950 and amended by Law 251 of 1961, and many of the provisions of the 1939 law have been superseded. The details concerning the present administration are reserved for a later chapter, but it is legitimate here to examine the intriguing question of how, in the absence of an autono-

mous municipal structure until 1949, Cairo managed to govern, administer, and coordinate a metropolitan conurbation that is one of the largest and most modern in Africa and the Middle East. The function took on new significance at the time of Isma'il, due to the stepped-up pace of municipal improvements, at which time the responsibility for designing and building public utility and municipal facilities was assigned to a special subsection of the Ministry of Public Works.

When this ministry was reorganized in 1879-1880, this faction section was revitalized and a special subunit of it was given its own staff and a separate budget in order to coordinate road planning for both Cairo and Giza.

Urban Problems

defence and security too crucial to be left to a local unit, with charitable institutions, hospitals, and other "public services" supported and administered under the auspices of, or later, the direct aegis of the ruler or the national govern-
ment, there were only a few nonsensical managerial functions which remained purely local in character and could be entrusted to local administrators. These were functions which in the past had often fallen within the jurisdiction of the mulkiyya and which, in the modern era, came under the rubric of the Cairo City Service. This political unit of urban management subcontracted, in many ways, for the missing municipal apparatus.

While the origins of this unit are somewhat obscure, there is no doubt that it represented an expansion of a basic local responsibility that had been recognized throughout Cairo's history, namely, the protection of the "public way" and of private property lines. While this responsibility may have occasion been more honored in the breach than in the performance, it was never questioned in theory. Its modern roots may be traced more specifically, however, to the Tanṣîm created under Muḥammad 'Alī during the last years of his rule, primarily for the purpose of executing the Ruz Neuve (al-Sīkha al-ṣa'dīdah) and other public projects. This function took on new significance at the time of Isma'il, due to the stepped-up pace of municipal improvements, at which time the responsibility for designing and building public utility and municipal facilities was assigned to a special subsection of the Ministry of Public Works.

When this ministry was reorganized in 1879-1880, this faction section was revitalized and a special subunit of it was given its own staff and a separate budget in order to coordinate road planning for both Cairo and Giza.

It was from this subsection of this subsection in the ministry that the Cairo City Service evolved. In Turkish, the name has a different connotation, specifically for the purpose. In an attempt to coordinate the activities of the various ministries of the central government with reference to local improvements, the reform of 1909 established in the provincial capital the "Central Suburban Committee of Municipalities," charged with overseeing the activities of the local governments, made up from representatives of the local government of the United Arab Republic (Institute of Public Health, Finance, and Public Health as well as the Director of the Section of Municipalities and Local Commission of the Ministry of Interior).


5 Chérig, Le Caire, 1, 357.

1 The powers invested in the City Service were those which, legally and in practice, had always existed in the government. For earlier references during Mamluk times, see I. M. Lapidus, Mamluk Cities in the Later Middle Ages (Harvard University Press, Cambridge: 1967), passim. The first identifiable Tanṣîm in Egypt was Tanṣîm-i al-Ṭawfīqiyah al-jahlîdah (Billâz Caire, Cairo, 1883), xx. 55. He notes, in the reorganization of the ministry in that year, three major subsections were estab-
lished: (1) Administration and budgets; (2) Environment and planning of projects; and (3) Tanṣîm for Cairo and other cities.

2 Chérig, Le Caire, 1, 357.

3 Chérig, Le Caire, 1, 357.
A sorely inadequate budget, however, was the chief obstacle to the proper functioning of the Cairo Town from 1890. This was due to the several reasons mentioned above, and the result of Cairo’s lack of municipal independence. Clergy of the department had control over the budget of its own, and only a recommendation for the purposes. This lack of fiscal capacity was a rock upon which many a development scheme in Cairo crumbled. In addition, several functions that had been performed by the Town Service were disengaged and assigned to other agencies, which resulted in increased problems of coordination. The Governor of Cairo assumed responsibility for supervising public lighting, the Department of Sanitation was charged with street cleaning and watering, and a private firm was engaged to repair and maintain the existing public ways. The coordination of all these activities in Cairo was presumably to be maintained through the Council of Towns.]

5. To propose to the minister the purchase of funds required for the construction or widening of streets, and to sell roadways no longer officially designated.

6. To establish the width of plantings adjacent to the public ways.

7. To notify the minister of expenses required by urban streets.

8. To present plans concerning the establishment of the public ways.

9. To issue orders concerning structures in need of repair when they endanger the public safety or threaten collapse.

The Official Map submitted by the Council of Towns to be approved by the Minister of Public Works: once approved, all construction on lands slated for expropriation was forbidden. Control was obtained through a system of licensing (No 444) (No 4).

11. Clergy, Le Cairo, 1, 398.

12. It must be remembered here that the Department of the Ministry of Public Works was responsible not only for services in Cairo and other communities lacking municipal status but also for planning and executing public buildings and roads throughout Egypt, as well as supervising plans submitted by local and municipal commissions, wherever these existed.

Adjoining the following:

TABLE 2. BUDGET ALLOCATIONS TO THE CAIRO CITY SERVICES IN SELECTED YEARS

<table>
<thead>
<tr>
<th>Year</th>
<th>Appropriation (LE) rounded to nearest 10,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912</td>
<td>300,000</td>
</tr>
<tr>
<td>1913</td>
<td>100,000</td>
</tr>
<tr>
<td>1914</td>
<td>200,000</td>
</tr>
<tr>
<td>1915</td>
<td>100,000</td>
</tr>
<tr>
<td>1916</td>
<td>140,000</td>
</tr>
<tr>
<td>1917</td>
<td>180,000</td>
</tr>
</tbody>
</table>

13. The official map of the city of the Department of Public Works, 1890, published by the Paris firm of Cassinelli et Cie. The map shows the location of each street, the type of street, and the type of building along each street. The map is a valuable tool for urban planning and public works in Cairo.

14. Egypt’s budget system was based on a system of taxation and expropriation, with the revenue from these sources distributed among the various levels of government, from the central government to the local authorities. The budget system was designed to ensure the fiscal stability of the state and to provide the necessary funds for the development of public works and other public services.

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During the second half of the nineteenth century when municipal service concessions of a modern type were first being granted in Egypt, this method was being used throughout France and other Western nations to achieve similar municipal goals. That is, there was nothing particularly unique about the institution, nor were the concessions granted in Egypt basically different in form from those concluded on the European continent. In fact, many of the French and Belgian firms engaged to provide Egyptian cities with water and gas systems, with public transit, etc., were well established at home and had had extensive experience with local communities in their own countries. (The firm of Lebou, given the concession for the gasworks, was as famous in France as the company of Bell, granted the Egyptian telephone concession, was in the United States.) It is true that by the end of the nineteenth century some of the abuses of the concession system were coming to be recognized in Europe and governments were attempting to impose more stringent regulations on standards and rates, but if the abuses were more rampant in Egypt than elsewhere, no more than a time-lag was involved.

A second point to be remembered is that the concession per se did not represent a significant departure from earlier Egyptian precedents for handling what modern public administrators might term "governmental functions." Throughout the Ottoman lands, the institution of "tax farming," or the granting of a concession, was used for the modern public utility concession. Reduced to its simplest terms, under this system the tax farmer (concessionaire) received from the government the right to collect taxes in a given area, to administer the customs house and collect duties, to run a postal service, etc. In return for his fixed payment to the government, he was granted wide latitude in the manner of collecting his profit his being the difference between his receipts and his initial investment. Thus, in an essential sense, the modern public utility concession was merely an extension of a preexisting and accepted pattern.

Nevertheless, dependence upon this method for the modern development of Cairo had certain serious consequences which were not completely ameliorated until drastic rationalization policies were instituted by the post-1952 revolutionary regime. One of the most serious problems that virtually all the concessions were granted to foreign nations. The terms of the agreements included clauses granting very lengthy duration but remarkably few specifications or performance guarantees. For example, the original water concession in Cairo (in actuality soon abrogated) was to have remained in force for 90 years, and other concessions were granted for periods of 50, 75, and 80 years. One searches almost in vain for evidence that concessions were ever granted to native Egyptians. A rare exception was the formation in 1907 of the Manial Trust in order to construct a railroad in the Fayyum but, significantly, "the results were not brilliant and the concession had to be transferred to an Anglo-Belgian firm." Thus it was that decisions made in the nineteenth and very early twentieth centuries were to bind Egypt to foreign control over her public utilities long after political independence had been achieved and after a competent cadre of indigenous financiers and administrators had evolved.

In addition, the fact that the original agreements had failed to reserve to the government the right to establish standards, to control performance, and, in some instances, to set rates—powers which a modern government expects to exercise over public utilities and services—led to constant friction. Periodic renegotiations of the concessions were attempted throughout the years between 1920 and 1950. While the original arrangements had not necessarily appeared disadvantageous at the time they were concluded, the evolution of a modern political philosophy which viewed government as the protector of the public welfare made the concession approach increasingly anomalous.

On the public level, therefore, Cairo's basic problem was one of coordination. Activities relating to urban development were fragmented among a variety of agencies, each responsible for certain aspects concentrated in the separately administered Tāmīmī department, but with responsibility for other basic services scattered among ministries of the central government. To top of this off other urban services were being provided by private firms financed with foreign capital and administered by persons whose connection with the indigenous community was so tenuous that the absence of an explicit contract even local pressures could be brought to bear upon them to temper the profit motive with a spirit of public service.18

Not only were functions thus fragmented in Cairo but concurrently absent was an independent municipal entity that could have been expected to take an overall view of the city, that could have helped to establish a set of compatible community goals, and that could have served as coordinator, urging or requiring the separate agencies and private concessionaires to act in accordance with this set of unified community goals.

17 Ibid., sec. pp. 205-221 for data on a number of these concessions. The quotation is my translation from p. 210.

18 This was, perhaps, the most basic difference between the earlier (Manial) and newer arrangements. In the final analysis, the Manial Trust considered themselves a part of the Islamic community, within which some social control existed, whereas the newer concessionaires acted as mere agents with the indige- nous population that might have transcended their alien identity and limited the full exercise of their power.


Urban Problems

It is highly significant that when the Cairo Baḥdāliyyah was established in accordance with the Municipality Law in 1963 the city was the site of a large Soviet expert group of engineers, architects, and other experts to formulate a master plan for the city—the first since the abortive attempt of Mahmūd Falaki and 'Alī Mudhirī almost a hundred years earlier. The preliminary surveys—covering residential distribution, industrial location, labor condi- tions, transport and communication, streets and highways, trade, commerce, recreation and education—were begun in 1953 and recommendations were issued in a published version of the Master Plan of Cairo in 1961. Although it would be too extreme to claim that the lack of an ade- quate governmental structure prevented the solution of many of Cairo's problems, there can be no doubt that it constituted an unnecessary hindrance.

If the lack of a coordinated municipal organization in Cairo presented a major deterrent to urban development on the public level, the lack of financial institutions to permit large-scale development presented a parallel impediment on the private level. Modern city building depends in large measure upon the institution of credit, more specifically, upon mortgage financing. Not only does this system permit rapid expansion of the housing stock in respect to demand, but it also facilitates large-scale development according to relatively coordinated plans. Both of these became increasingly necessary in Cairo during the period of urban expansion ushered in at the turn of the twentieth century. Up to the middle of the nineteenth century, modern banking and mortgage financing, in the Western sense, were virtually unknown and apparently unmixed in Egypt. While the reasons for this are complex, two underlying factors often suggested are: (1) the basic premise of banking offended the Islamic injunction against usury; and (2) a long history of property insecurity (and, indeed, the weakness of the institution of private property in real estate property) whenever possible or to gold-hoarding rather than saving. Institutions for credit extension, for deposit savings, and for organized (corporate) investment were slow in gaining acceptance in Egypt and, when first established, were used almost exclusively by members of the foreign communities.

The rulers, it is true, recognized the virtues of credit and, indeed, became heavily dependent upon it. Mahāmmad 'Alī, for example, had from time to time been forced to issue treasury bonds to cover salary payments. In fact,

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Just as the Ministry of Public Works became, by design or default, responsible for Cairo's public works, so also did the government (through the minister) of the national government each took on responsibility for planning, executing, and administering Cairo's various public facilities. Hospitals, clinics, and other medical units were provided under the auspices of the Ministry of Health. Primary and secondary schools, as well as colleges and universities, were constructed according to priorities established by the Ministry of Education. Public security and the Cairo police came under the jurisdiction of the Ministry of the Interior, etc.

This structural fragmentation based on "function" rather than "location" had important implications for the type of local planning that could be done. When the locality was the basic unit of planning, a given budget must be allocated among competing community goals. Decisions cluster around such questions as: how much for education balanced against how much for health balanced against how much for highways or recreation, etc. On the other hand, where function (on the national level) is the basic unit of planning, the allocation decisions revolve to a large extent around competing localities. How much of the given public works budget can be allocated to Cairo and how much to other locations? What proportion of the public health budget should be spent on Caïrens? In this case, each community attempts to maximize its share of the budget and, without necessarily considering the effect of each upon "balanced" community development. Furthermore, the diffusion of responsibility among separate ministries intensifies the problem of coordination. Effective management requires that separate programs be "timed" in their execution and that goals, if not coordinated, at least ought not to conflict. In Egypt, the institution of the provincial and local government, with the concomitant fragmentation of the concerned ministries, was designed to achieve this coordination, but practice often fell short of theory.

In Cairo, public facilities that were not provided by the City Service or by the other national ministries were left to private concessionaires, a procedure which further compounded the fragmentation and intensified the need for coordination. The status of the "concession" in nine- teenth-century Egyptian law, and some of the conse- quences for public welfare of so heavy a dependence upon this method of providing municipal services, there- fore, cannot be ignored in any study of Cairo's develop- ment. However, since the general topic has been thor- oughly explored elsewhere,13 only a brief résumé is required for our purposes.
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The failure of Egypt's first bank, which had been founded in 1859, has been blamed on the fact that it became so involved in speculation that it had no funds left for banking operations. Another bank, founded in the 1860s by a group of European financiers, also founded on a similar reef at the time of Sa'd. During the reign of Ismail, the state's financial situation became very difficult and the government considerably indebted. In addition, the British were involved in a major land dispute with the government. At the opposite extreme, each year thousands of petty loans were negotiated individually on agricultural lands in order to meet ill-timed tax levies, but such disorganized and small-scale operations could scarcely qualify as mortgages; in fact, they were highly irregular procedures since, until the reform in land laws in 1875, very little of the land in Egypt was in freehold tenure, so that it could not even be pledged legally against a loan.

Apparent, there were two prerequisites to the emergence of modern mortgage institutions in Egypt, both of which had been attained by 1880. The first was unequivocal and regularized laws governing the private ownership of real property; the second was European motivation for mortgage institutions, understandable about 1890, until European nations took over real estate. Both were instituted in 1828. The 1866 Code of that year recognized hereditary rights to agricultural land formerly considered part of the state domains, thus facilitating the extension of private freehold ownership over much of the country. In addition, under the Code, foreign nationals were given the right to purchase land that had been abandoned by its cultivator or forfeited for tax arrears. Subsequent reforms and a major simplification in land tenure categories that had been progressively complicated by accretions of Islamic and Ottoman precedents, as well as the institutionalization of a system of recording land titles in various courts, resulted by 1880 in a totally revised system of land ownership, in which the government is involved in banking. Thus, the British bank left the government to handle large and indispensable part of state policy, and several European banks and branches were in operation in Egypt—not as public institutions but, more properly speaking, as "financial houses," specializing in interest-bearing loans to the government. At the opposite extreme, each year thousands of petty loans were negotiated individually on agricultural lands in order to meet ill-timed tax levies, but such disorganized and small-scale operations could scarcely qualify as mortgages; in fact, they were highly irregular procedures since, until the reform in land laws in 1875, very little of the land in Egypt was in freehold tenure, so that it could not even be pledged legally against a loan.

...
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Thus, the first fruits of the mortgage institution in Cairo were speculation and premature subventions. Obviously, sound urban development required more than the institution itself. It required indigenously-creative strength, based upon real rather than spurious improvements in productivity and demand, and it required a rational and creative rather than a wildly speculative use of the new tool. Evidence of the emergence of sound mortgage practices and of vigorous local investment does not appear in Egypt until after World War I. At that time Cairo entered another period of boom in land values and experienced a new spurt in building activity somewhat reminiscent of the earlier inflation. However, in very basic terms, this new expansion differed radically from the one that had ended so disastrously only a dozen years earlier. First, it was based upon demand whereas the earlier one had been based upon anticipation. By then, Cairo was suffering from a severe housing shortage since wartime migration had swollen the population just as the time construction was halted because of compelling war requirements. Furthermore, prosperity had nurtured a rise in standards and expectations in housing which stimulated additional demand. Not only was the demand real, but the supply of capital this time was abundant, indigenous, and attracted to investment in land and buildings. Much of it had been accumulated locally through wartime profit taking. While some of this new capital was used productively abroad and some flowed into the industries sponsored by the newly organized Bank Misr, a substantial portion helped to sustain the high level of construction in Cairo. During the 1920's, according to one estimate, cigarette factories alone contributed to twenty years earlier were finally developed with apartment houses and office buildings, many containing shops or even small industrial workshops on the ground level. In this development, Cairo experienced a conscious, almost structural if limited role. While Egyptians continued to prefer outright ownership of a single building to encumbered title to several, which meant that mortgage financing never became as important in Cairo as it did in Western cities, nevertheless, the Cairo real estate market was freed from its earlier subjection to fluctuations on the bourses of Europe and thus gained a greater flexibility than it had earlier. It would be a gross oversimplification, however, to conclude that the basic problem had been solved. It must be borne in mind that mortgage and land companies in Egypt were primarily interested in rural agricultural holdings, not in urban development, which is one reason why so little has ever been written on their activities in urban areas.34 The

ownership titles to land and buildings do not necessarily go together. Separate forms of tenure, and indeed separate parties with property rights, were common on the same parcel. The land itself might be owned by or in waqf to one party while the building and even separate floors of the structure might be held by others.35

Indebtedness for mortgage finance was, of course, no problem with respect to lands and buildings in the quasi-public real estate of waqf. Some of it had been deeded in very large parcels, and additional land assembly was facilitated, once the separate holdings of individual beneficary institutions were combined within a centralized administration or Ministry of Waqf. Furthermore, the operating budget of this central body was quite liberal. The chronic capital shortage which characteristically interfered with the maintenance and redevelopment of private waqfs' properties was not felt within the waqf khayri. The religious authorities had the power to enforce reinvestment in a deprecating property and could, if they chose, decide upon new construction or major rehabilitation. It was not accidental that one of the only attempts in nineteenth-century Cairo to reclaim a blighted area and to reconstruct a residential quarter according to a unified plan was the project 'Ali Mahirak had executed on waqf khayri land south of Sayidah Zay- nah. Indeed, as a contributor to sound urban development, the institution of the public waqf was in a potentially very able and important role.

Real estate that had been constituted into family trusts presented entirely different and much more complicated problems. Inherent in the system of the family or private waqf was the same inherent impediment to maintenance and/or redevelopment could rarely be financed by internal means, and that the property itself could not be used to obtain development capital. The bequest specified that the property be held by the family for some given period, after which maintenance and administrative expenses had been deductible, were to be distributed among the beneficiaries, not reinvested in the property. Although beneficiaries could voluntarily choose to reinvest, no sanctions were available to encourage compliance. And, since the property itself could neither be pledged against a loan nor parts of it sold for the purpose of accumulating the capital required to develop the remaining portions, the system was by definition at best a static one in which adequate maintenance was all that could be hoped for. Even this minimal goal, however, became increasingly difficult to attain with each passing year after the demise of the original creator of the waqf. As beneficiaries multiplied and interests became more fragmented, responsibility for administering the property fell inevitably to salaried functionaries (the '/XML) whose short-term goals dominated development decisions. The sole criterion of successful administration was a regular payment to the beneficiaries, rather than the long-term preservation of the property value.

In three ways out of this impasse were possible. Either (1) the beneficiaries died, at which point the property was absorbed into the waqf khayri; (2) the property deteriorated to the point where the original value was totally destroyed; or (3) the property was sold in the market as frehold. But (2) long-term leases on the property could be granted to investors with capital. Ever since the seventeenth century, leasing had become more and more prevalent in Egypt and, by the nineteenth century, three basic lease forms—the fiqr, the khila, and the jiraqan—were in use.36 Each was an ingenious device designed to circumvent the restrictive terms of the waqf by attracting outside growth capital. Not only private waqf could be rented on these terms but even parts of the waqf khayri as well.37 Naturally, these devices were most effective during periods of economic expansion and healthy demand; in ways, dependence upon them created a much more volatile real estate market than would have resulted from simple private ownership.

Early in the nineteenth century, attempts were made to reform some of the abuses deriving from the waqf form of tenure, to convert some waqf lands to other forms of ownership, and to adapt the system to modern requirements. Thus, when Muhammad 'Ali commenced his land reforms after 1812, many waqf lands had already been gradually converted into waqf but which had never been held as frehold (mulk) by the original bequestors.38


were confiscated or, with only minimal compensation, were absorbed into the crown lands. This action was consistent with the grounds that only waqf property can be converted into a legally valid waqf. From this confiscation some have drawn the erroneous conclusion that Muhammad 'All attempted to abolish the waqf system itself. Actually, only private waqf of dubious authenticity were involved in this early reform. A more basic change was introduced in 1839, when a State Administration was set up to oversee many waqf khāyār properties. It was this organization that constituted the nucleus—or rather the prototype, since it lasted only a few years—of what was later to develop into the Ministry of Waqf. A direct attack on the waqf institution itself, and a remarkably restrained one at that, was not ventured by Muhammad 'All until the end of his reign when, in the Land Law of 1846, he forbade the future creation of awqāf. But an institution so deeply ingrained and so legitimized by religion as the waqf was not to be abolished that easily. In "the case of waqfs of buildings and of urban land, it appears never to have been executed; in the case of agri-
cultural land, it was effective for a short time only."15

Waqfs developed during the second half of the nineteenth century were characterized by two somewhat antibacterial trends. On the one hand, there was an in-
crease in the amount of waqf property. Paradoxically, the conversion of much of the country's land to freehold tenure,
was not bad for the cause of society. Griffith's Code of 1858 made possible the creation of legitimate waqf on many lands and buildings which were ineligible under their previous forms of tenure. This led inevitably to a steady increase in the number of waqfs involved over 50,000 faddans or acres. On the other hand, the government attempted to extend its control over waqf holdings and to channel their charitable intentions into government-controlled ventures. Realizing perhaps that the waqf was potentially a "government within a
government," it sought to coordinate its resources with the goals of the state. Thus, the State Administration that had been founded by Muhammad 'All was reconstituted by 'Abdīn I in 1859. In 1864 Isma'il declared that this admis-
stration should succeed every adīr of a charitable waqf upon his death or removal from office, which re-
sulted in further centralization. Soon afterward, the ad-
ministration was elevated to an official ministry of the
government. It appeared that, within the waqf khāyār at least, progress was being made in incorporating an anachronistic institution within the framework of modern government.

This trend was reversed, however, when Britain enter-
ted the affairs of Egypt after 1882. The advantages of


16 Almanac of 1837, p. 115-116 gives a summary account of this and later administrative reorganization.

17 quoted from the Eiti Curometer. See also A. J. M. (Memin and Company, Ltd, London: 1915), p. 79. From the context it is obvious that he is describing the situation as it existed before the turn of the century. It should be noted here that 'Abdīl I came under attack not only from Crau but from the Muslim reform-
formers as well, who renewed his personal appropriation of waqf revenues. Muhammad 'Abdīn, in fact, clashed with 'Abdīn over this very issue.


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gratly been short of more and more of its resources and independence.

The final pressing problem which Cairo inherited from the nineteenth century was, of course, the social and functional bifurcation of the city into its two basic components—the old city and the new. Instead of being resolved in the first part of the twentieth century this problem became, in fact, more severe. It also differed in very essential fashion from the types of problems that had been discussed above, for this bifurcation was no more "abusive" which hindered development. It was no superficial "problem" that could be solved directly through institutional or governmental reforms or edicts. This condition was nothing less than the physical reflection of the problems that afflicted Egyptian society itself. It was tangible and graphic evidence of that rent in the social fabric which new societies, emerging from a colonial past, must everywhere seek to mend, eliminating the threads which cannot be incorporated into the new warp and woof, and strengthening those which, from below, have broken or frayed. A union between the two cities of Cairo was not likely to occur unless and until the deep cleavages of Egypt's entire social structure—those which separated class from mass, alien or alienated elite from indigenous proletariat—were somehow melded or bridged.

The fourteenth century had been all of one piece. While certain subareas of the city ranked above others socially, and whereas the segregation of subgroups persisted along lines established during the Middle Ages, these represented a separate dimension of social space. Even the new city added by Isma'il II in the 1380s might have been absorbed into this common framework. It had remained merely "Western-influenced," rather than having the self-consciously Western decors, into "Western-dominated." The Western forms of city structure, had they been inhabited by Egyptians, might have gradually been assimilated to Eastern needs, and the cleavage between the two cities might never have become so extreme. However, with colonial rule and the influx of large numbers of Europeans, this new portion of the city was increasingly marked off as a "foreign" preserve. Azbakiyah, the center of the new city, contained over 7,000 inhabitants in 1917, of whom only under 14,000 were Egyptian Muslims. The discontinuity between the two cities had ceased to be one of degree and had become one of kind.

While the underlying causes of Cairo's dual structure, then, must be traced ultimately to the very organization of Egyptian society, the duality itself was encouraged and intensified by the processes of modernization and technological change that, at an ever-increasing pace, proliferated during the twentieth century. In these events created new problems for the city, or led to the recognition of new areas of difficulty. Wherever their impact was felt—and this was chiefly in the newer quarters of the city, because in most of the old city the new technologies demanded and only there could they be accommodated and absorbed—one physical part of the city and one social portion of the community raced ahead, leaving greater and greater distance between itself and the remainder. In the short run, technological developments created new problems for the city, but problems that were felt selectively and primarily within the new city that grew up to the west and north of the original nucleus. In the long run, they created the major problem which Cairo now faces, namely, how to reunite the fragmented community and upgrade that portion of the city hitherto ignored in the process of modernization.

If one were to single out the two most important aspects of modernization that have affected Cairo's twentieth-century metamorphosis and have offered some of her most pressing challenges, one might easily select the car and the factory. Obviously, these are the very same elements that one might also select in discussing the evolution of any other modern city. But whereas the influx of the car appeared to be the driving force, the solutions attempted must be viewed in the context of Cairo's specific character.

In 1903, when the first automobiles were introduced to the streets of Cairo, few could have foreseen the consequences of this evolution. The immediate impact, it must be admitted, was minimal. Cars neither displaced the usual wheeled vehicles nor increased their use, as can be seen from Table 3.1. This was just as well, since Cairo's streets were in no way prepared. They were primarily unpaved and often deeply rutted, making them uncomfortable for animal-drawn vehicles and virtually impassable for vehicles of greater speed. In 1905, just prior to the "auto age," of the 2.87 million square meters of Cairo's area devoted to public roads, more than half were merely unpaved, mud-surfaced pathways. Even of the "improved" roadways, most were minimally improved by a macadam base covered with gravel. Macadam roads covered by basil and fully modernized roads paved with asphalt constituted only 9 percent of the total area in streets. Thus what few cars were introduced were confined to a tightly circumscribed circuit. In addition, most streets in the city, even if they had been paved, were much too narrow to admit a fast-sired vehicle. At the turn of the twentieth century, 85 percent of the entire length of the circulation system consisted of streets so narrow that the passage of automobiles and trucks was absolutely impossible. A third of all the streets could admit one-way traffic at all; and only 8 percent were wide enough to accommodate two-way traffic. That few Cairo streets had separate sidewalks for pedestrians, that tram tracks often pre-empted most of the roadway of the wider streets, and that the dominant means of transportation in the city was still by foot or donkey, merely intensified the inadequacy of the circulation system for modern means of transportation. The situation had all the ingredients of an impending catastrophe. If the 1880s were the years of the "race against bankruptcy," the twentieth century was to be the era of the race between cars and roads.

Table 3.1. Increase in Vehicles in Cairo, 1900-1910

<table>
<thead>
<tr>
<th>Type of Vehicle</th>
<th>Number of Vehicles in Cairo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1900</td>
</tr>
<tr>
<td>Passenger carriages</td>
<td>1,900</td>
</tr>
<tr>
<td>(Coaches)</td>
<td>(2,000)</td>
</tr>
<tr>
<td>Carts, waggons, and tripats</td>
<td>10,000</td>
</tr>
<tr>
<td>(Drivers of cards)</td>
<td>(16,000)</td>
</tr>
<tr>
<td>(Wheelbarrow operators)</td>
<td>(2,500)</td>
</tr>
<tr>
<td>Taxis</td>
<td>none</td>
</tr>
<tr>
<td>Private automobiles</td>
<td>619</td>
</tr>
<tr>
<td>Motorcycles</td>
<td>82</td>
</tr>
</tbody>
</table>

At first it appeared that the "street builders" might emerge victorious. A Herculean effort was made during the first two decades of the twentieth century to outstrip vehicular growth and to convert the roads at least in the western and northern portions of the city to modern requirements. Particularly in the flush years between 1910 and 1916 much progress was recorded. By the latter year, despite an overall expansion of the circulation system, unimproved roads had been reduced to 43 percent (from 54 percent in 1910), while those paved with basalt or asphalt increased from 3 percent to 86 percent only six years later. Gravel, which was of course totally inadequate for automobile traffic, was abandoned. The proportion of the system with gravel surfaced was reduced to 25 percent, many of the roads were converted to harder surfaces. This remarkable rate of progress continued into the next decade and, by 1929, the Cairo street area that had been provided with modern paving amounted to 2.5 million square meters. Unimproved roadways persisted chiefly on the outskirts or in the heart of the medieval core.

This expansion kept pace with the rapid increase in automobiles and trucks and, except in the oldest quarters of the city, the streets proved adequate to accommodate their needs. However, in the 1930s there appeared signs of a slackening pace of street improvements just at the moment when the demands generated by the mass-produced automobile became more insistent. By the 1930s, matters had begun to get "out of hand," with motor vehicles increasing far more rapidly than streets could be widened and redesigned to accommodate them. The late 1930s witnessed a "wheeling population explosion" in which vehicles doubled in number while street conditions remained constant. By the time wide-scale reconstruction and ambitious highway projects were undertaken in the 1950s, Cairo had become so congested that she required the kind of drastic surgery familiar to metropolitan dwellers all over the world. A few illustrative figures may help to paint this picture more vividly. In 1930 there were perhaps 7,000 to 8,000 private cars in Cairo plus a small number of taxicabs, trucks, and buses. Five years later the number of private cars exceeded 15,000, supplemented by some 20,000 taxis, trucks, and buses. By 1940, there were over 12,000 cars registered in the city, and, although their number had declined somewhat by 1949, due to the unavailability of new cars during the war years, this decrease was more than compensated for by the increased number of taxicabs (1,400), trucks (2,200), and buses (729) on the roads. Motorcycles as well had begun to join the crowded traffic stream and by 1930 there were 190, in 1940 there was a temporary setback of the war years was soon overcome and, in the single decade between 1945 and 1955, the number of private automobiles in Cairo almost tripled. By the latter year, there were over 34,000 private cars in addition to more than 5,000 taxicabs, over 7,000 trucks and lorries, well in excess of 3,000 buses, and close to 5,000 motorcycles—all competing with pedestrians and animals for space on the streets of Cairo.40

40 Figures are adapted from those appearing in Nilyat, al-Du'Alih, Table 7, p. 15, and Table 18, p. 18. Either there has been an interruption in the rate of increase, possibly due to restrictions imposed after the Suez War of 1956 or Nilyat's figures include more than Cairo registrations of vehicles. The last issue of Amsaareh Sztatistaks, 1960/1961 (Government Printing Office, Cairo: 1961), p. 304, gave the following figures for licensed vehicles in Cairo in 1959 and 1960:

<table>
<thead>
<tr>
<th>Year</th>
<th>Private Cars</th>
<th>Taxicabs</th>
<th>Commercial Taxis</th>
<th>Public</th>
<th>Private</th>
<th>School</th>
<th>Tourist</th>
<th>Trucks</th>
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<tr>
<td>1959</td>
<td>31,133</td>
<td>4,374</td>
<td>4,659</td>
<td>598</td>
<td>291</td>
<td>358</td>
<td>118</td>
<td>2,105</td>
<td>8,250</td>
</tr>
<tr>
<td>1960</td>
<td>37,957</td>
<td>5,085</td>
<td>4,631</td>
<td>598</td>
<td>291</td>
<td>358</td>
<td>118</td>
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While this vehicular density may not appear particularly impressive to readers familiar with comparable figures for New York City, it takes on greater significance when one remembers that traffic in Cairo had to be concentrated within only a fraction of the city’s total extent. First, the entire old city—with the exception of those few areas which had been violently imposed—was closed to motor traffic. In addition, extensive of income distribution and a concentration of the wealthier classes in just a few of the newer areas led to extremely heavy concentrations of private cars in selected sections of the city. What was true with respect to residential areas was even truer of the commercial zones. Although trucks serviced the newer “western” business district, they remained an irrelevant mode of transportation for the older commercial areas. Therefore, the vehicles reported above were all concentrated within a relatively small portion of the city, increasing the actual if not the statistical density of traffic to congestion heights. Furthermore, most of these vehicles were likely to be on the streets at the same time, since virtually no provisions had been made for off-street parking in the commercial zones and, until quite recently, almost no apartment buildings were constructed with subscribable garages.

In addition, just at the time when traffic was becoming more dense, the feasibility of widening existing ways or of cutting new arteries was disappearing. Methods of house construction had changed. Whereas low-value, replaceable mudbrick structures might have been built a century earlier, the new construction favored stone and reinforced poured concrete. These new buildings lined the roads, presenting a solid phalanx against the enroachments of potential thoroughfares. They sprang up along each new street, rigidifying the pattern before second thoughts could be entertained. It is perhaps a commentary on the situation that, between 1925 and 1937, when the problem of circulation took on the character of a disaster, only four major roadways were added to the circulation system within the built-up portion of the city. Of these, two were dependent for their rights of way upon filled-in canal beds (the Shari’ al-Khalil, added before the turn of the century, and the now Shari’ Ramses, constructed during the second decade of the century along the course of the Ismailiyah Canal), while the other two (Shari’ al-Jaysh and Shari’ al-Azhar) were both constructed in the late 1920s at the expense of and for the use of the Tramway Company.

In brief, an enormous backlog had accumulated by the 1950s and stragulation appeared imminent. When the revolutionary regime took over in 1952, it was faced not only with the problem of planning for future urban expansion but with one which had been allowed to accumulate over the preceding decades during which motor vehicles had finally come to dominate.

While a later section will describe the major street projects executed within the past decade in Cairo, it is significant that they fell far short of deliveries of the full half-century before. Between 1921 and 1935, some 5.5 million square meters of Cairo’s street system were paved, and among the more important thoroughfares constructed were Faisal Street, the Khallil, Tur’ah Ghanirah (Shari’ Ramses), Shari’ Shubra, al-Tur’at al-Baladiyyah, the road to the pyramids, etc.21 It is virtually impossible to consider traffic movement within Cairo without reference to these essential thoroughfares. Much still remained to be done in untangling Cairo’s perpetual traffic snarl, but there at least appears hope that the problem will receive the attention it deserves.

If automobiles introduced one new major problem, the industrialization introduced the other. Although the modern, large-scale, assembly-line factory has just recently emerged as an eye-catching embellishment on the Egyptian landscape and small firms (employing under ten persons) still dominate the Cairo industrial picture, the gradual transition from tiny workshop to factory dictated rather dramatic alterations in the land-use pattern of the city. Indeed, this trend is creating problems which are likely to be felt with increasing intensity as it gains momentum in the coming few decades.

The trend in itself is a composite of several types of changes. First, the numbers of people involved have been increasing, and there has been a noticeable shift from agriculture—as the source of livelihood for most of the population—to commerce and industry. It is important to recall that as late as 1877, when Ismail collected some “labor force” data in his Misielpah survey, some 96 percent of the city’s active labor force was still engaged in farming.22 Most of the land within the official city boundaries was used for urban purposes but for agriculture. By 1927, primary production had been reduced to a minor element in the economic base of the community, both proportionately and numerically. According to the census of that year, only 16,144 persons (about 7 percent of the active labor force) were engaged in agriculture. By 1937, the percentage had dropped to six while the number of farmers remained constant.23 Since that time, there has been a steady decrease until, at present, under 3 percent of the Cairo labor force earns its living from full-time farming.

Another important change was the increase in the size of commercial and industrial firms employing the nonfarming portion of the labor force. The typical firm, in nineteenth-century Cairo as well as in the preceding centuries, was a family-size enterprise; furthermore, many persons worked either without fixed premises (“entrepreneurs” offering itinerant services or working in small-scale distribution) or on premises which required less space than the average dwelling. With the exception of the slaughterhouses, the pottery kilns, the quarries, and a few of the specialized industries that had been common under Muhammad Ali, which required larger plots, there was no industry—even metal-working and fabricating—that could not easily be fitted into small, undifferentiated spaces as they became vacant. Except in the case of bakeries and baths, which required large fixed ovens, industry and commerce were highly mobile. Tools were portable and inventories virtually nonexistent. If firms tended to remain immobile, which they did, this was due to social rather than technological factors.

It was these characteristics that made possible the intimate intertwining of land uses that prevailed in Cairo from its earliest history up to the present century. As changes occurred, greater differentiation and specialization of land uses resulted, due both to the larger scale of enterprise and more elaborate capitalization. These increases in scale coincided with the expansion of the city from the original medieval nucleus to the regions both north and west of it. Since by this time the older commercial and industrial districts were fairly well saturated, and since, in any case, the newer forms could not be crowded into the tiny premises available there, it was inevitable that the commercial and industrial establishments being added to the city’s economic base gravitated to the open land of the developing quarters. Initially, they were located within the central portions of the new city with almost as much residential intermixture as prevailed in the medieval core. Commercial premises were slightly more commodious, to accommodate the larger inventories demanded by a “Westernized” clientele, and the modest plants and repair centers that began to dot the newer quarters had to be somewhat larger to make room for “new-fangled” motor driven machines; but, still, the scale remained small.

Little if any attempt was made to segregate these uses.

88. Family-size industrial workshop in Bil‘ah, 1969

89. New iron and steel mill in Halwa

To a population which took mixed land use for granted as an essential characteristic of urban life and which was well accustomed to a fairly high level of background noise, the existence of small repair and machine shops, of stores and service establishments tucked throughout even the normally residential areas was no cause for concern. They distribution was dictated more by ecological convenience than regulation. Thus, concentrations of particular industries arose in districts occupied by ethnic groups engaged in special trades, i.e., machine shops in the Italan
While this vehicular density may not appear particularly impressive to readers familiar with comparable figures for New York City, it takes on a greater significance when one remembers that traffic in Cairo had to be concentrated within only a fraction of the city's total extent. First, the entire old city—with the exception of those few streets which had been viciously impeded—was closed to motor traffic. In addition, extremes of income distribution and a concentration of the wealthier classes in just a few of the newer areas led to extremely heavy concentrations of private cars in selected sections of the city. What was true with respect to residential areas was even truer of the commercial zones. Although trucks serviced the newer "western" business district, they remained an irrelevant mode of transportation for the older commercial areas. Therefore, the vehicles reported above were all concentrated within a relatively small portion of the city, increasing the actual if not the statistical density of traffic to congestion heights. Furthermore, most of these vehicles were likely to be out on the streets at the same time, since virtually no provisions had been made for off-street parking in the commercial zones and, until quite recently, almost no apartment buildings were constructed with subterranean garages.

In addition, just at the time when traffic was becoming more dense, the feasibility of widening existing ways or of cutting new arterials was diminishing. Methods of house construction had changed. Whereas low-value, replaceable mudbrick structures might have been built a century earlier, the new construction favored stone and reinforced poured concrete. These new buildings lined the roads, presenting a solid phalanx against the encroachments of potential thoroughfares. They sprang up along each new street, rigidifying the pattern before second thoughts could be entertained. It is perhaps a commentary on the situation that between 1952 and 1957, when the problem of circulation took on the character of a disaster, only four major thoroughfares were added to the circulation system within the built-up portion of the city. Of these, two were dependent for their rights of way upon-filled-in canal banks (the Shari‘ Al-Khaliji, added before the turn of the century, and the [now] Shari‘ Ramses), constructed during the second decade of the century along the course of the Ismailiyah Canal, while the other two (Shari‘ Al-Jaysh and Shari‘ Al-Azhar) were both constructed in the late 1920's at the expense of and for the use of the Tramway Company.

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While a later section will describe the major street projects executed within the past decade in Cairo, it is significant to note that they fall well short of the requirements of the full half-century before. Between 1952 and 1956, some 5.5 million square meters of Cairo's street system were paved, and among the more important thoroughfares added or enlarged were Al-Faraghi, the Khaliji, Turah Gharmi (Shari‘ Ramses), Shari‘ Shubra, Al-Turt at Al-Balbala‘iyah, the road to the pyramids, etc. It is virtually impossible to consider traffic movement within Cairo without reference to these essential thoroughfares. Much still needs to be done, but the pressure of Cairo's perpetual traffic snarl, but there at least appears hope that the problem will receive the attention it deserves.

If automobiles introduced one new major problem, industrialization introduced the other. Although the modern, large-scale, assembly-line factory has just recently emerged as an eye-catching embodiment on the Egyptian landscape and small firms (employing under ten persons) still dominate the Cairo industrial picture, the gradual transition from tiny workshop to factory dictated rather dramatic alterations in the land use pattern of the city. Indeed, this trend is creating problems which are likely to be felt with increasing intensity as it gains momentum in the coming few decades.

The trend in itself is a composite of several types of changes. First, the need to be done in untangling Cairo's problems, there has been a noticeable shift from agriculture—as the source of livelihood for most of the population—to commerce and industry. It is important to recall that as late as 1871, when Lami collected some "labor force" data in his Musabalah survey, some 96 percent of the city's active labor force was still engaged in farming. Most of the land within the official city boundaries was used not for urban purposes but for agriculture. By 1959, primary production had been reduced to a minor element in the economic base of the community, both proportionately and numerically. According to the census of that year, only 16,444 persons (about 7 percent of the active labor force) were engaged in agriculture. By 1977, the percentage had dropped to six while the number of farmers remained constant. Since that time, there has been a

38 United Arab Republic, Ministry of Information, Al-Katib Al-Samani 1959 (Cairo, 1959), pp. 624-643. See also Ministry of Information, Al-Katib Al-Samani 1962 (Cairo, 1962), p. 59, which reports that since 1951 some LE 5,000,000 have been expended on street paving and sidewalks in Cairo.

39 The source for this figure, which must be used with caution since inadequate operational definitions are not given, is Etat de statistique générale de l'Egypte, année 1871 . . . 1877 (un-primier de l'état-Major Général Egyptien, Cairo, 1979), Tables XIV and X, pp. 119-121.

40 Compiled from The Census of Egypt Taken in 1957, Volume II, Table II, pp. 380-405. Since in this table the total labor force includes housewives, people in institutions, school children, and the like, I have excluded them to obtain an "active labor force" base comparable to that evidently used in the Musabalah survey. The number of persons in agricultural employment was compared against this reduced base to derive the percentage in agriculture.

steady decrease until, at present, under 3 percent of the Cairo labor force earns its living from full-time farming. Second, employment in the large urban factories has increased the average size of commercial and industrial firms employing the nonfarming portion of the labor force. The typical firm, in nineteenth-century Cairo as well as in the preceding centuries, was a family-size enterprise; furthermore, many persons worked either without fixed premises ("entrepreneurs" offering itinerant services or engaged in small-scale distribution) or on premises which required less space than the average dwelling. With the exception of the slaughterhouses, the pottery kilns, the quarries, and a few of the specialized industries that had been commenced under Muhammad 'Ali, which required larger plots, there was no industry—even metal-working and fabricating—that could not easily be fitted into small undifferentiated spaces as they became vacant. Except in the case of bakeries and baths, which required large fixed ovens, industry and commerce were highly mobile. Tools were portable and inventories virtually nonexistent. If firms tended to remain immobile, which they did, this was due to social rather than technological factors.

It was these characteristics that made possible the intimate intermixing of land uses that prevailed in Cairo from its earliest history up to the present century. As changes occurred, greater differentiation and specialization of land uses resulted, due both to the larger scale of enterprise and more elaborate capitalization. These increases in scale coincided with the expansion of the city from the original medieval nucleus to the regions both north and west of it. Since by this time the older commercial and industrial districts were fairly well saturated, and since, in any case, the newer forms could not be crowded into the tiny premises available there, it was inevitable that the commercial and industrial establishments being added to the city's economic base gravitated to the open land of the developing quarters. Initially, they were located within the central portions of the new city with almost as much residential intermixture as prevailed in the medieval core. Commercial premises were slightly more commodious, to accommodate the larger inventories demanded by a "Westernized" clientele, and the modest production and repair centers that began to dot the newer quarters had to be somewhat larger to make room for "new-fangled" motor driven machines; but, still, the scale remained small.

Little if any attempt was made to segregate these uses. To a population which took mixed land use for granted as an essential characteristic of urban life and which was well accustomed to a fairly high level of background noise, the existence of small repair and machine shops, of stores and service establishments studded throughout even the most suburban areas was no cause for concern. Their distribution was dictated more by ecological convenience than regulation. Thus, concentrations of particular industries arose in districts occupied by ethnic groups engaged in special trades, I.e., machine shops in the Italian
quarter, groceries and coffee shops in the Greek zone, ribbons and sewing findings in the Mā'ālaki. These few developing industries that required larger sites and heavier installations, or whose raw materials and products were bulkier, tended to segregate themselves in the northern portion of Fālīlīl, not because they were relegated to this region by design or because they wished to isolate themselves, but simply because access to port facilities and later to the major rail sidings there (in Sābihīyā) gave this location its competitive advantage.

It was not until the 1920s and even more in the 1930s that followed, that larger-scale commercial establishments began to be segregated in the central business district of Asādlīyā (including the first “department store”), and that certain new “factories” employing more than the traditional minimal labor force, began to seek peripheral locations where land costs were lower and where production lines could be spread out according to crude assembly-line principles. Even then, however, the general scale of both commercial and industrial plants remained small, not only in comparison with industrialized nations but even in comparison with rival Alexandria.

This situation, to a large extent, persists to the present. The overwhelming majority of Cairo’s industrial and commercial firms are still extremely modest operations, which permits them a diffuseness of location unanticipated in a modern city. According to a survey in 1972, 55 percent of the industrial labor force of Cairo was employed by the 85 percent of all firms consisting of four or less persons! One- and two-person businesses accounted for two-thirds of all industrial firms and employed almost one-third of the industrial labor force of the city. The average size of a firm was only 36 workers. The average size of commercial establishments was even smaller and, in addition, over one-fifth of all firms were engaged in “personal service” (many requiring no fixed premises) while more than half were retail stores, the majority of which occupied no more space than a one-car garage. Thus, even in the present era, the small size and lack of specialized requirements of non-residential premises permit a lesser intermittence of land uses than could be tolerated in a Western city of comparable complexity.

Nevertheless, the very fact that there are now even a small number of industrial plants that employ over 500 workers indicates a new set of problems that are likely to grow more severe as these plants become not the exception but the rule under current programs of industrialization. During World War II and again after 1955, a substantial number of large factories were constructed on the periphery, clearly in new industrial estates, first north (Shubrá al-Khaymah) and then south (Hawām) of the built-up city. While these modern establishments resemble those constructed elsewhere, they generate problems which are significantly different. The laborers they employ must either be housed adjacent to the plant, often on land better suited to agriculture or industry than to residence, or they must be transported by bus from distant points, often along routes which cannot sustain sufficient demand to warrant public service. The proliferation of the private automobile, which went hand in hand with industrial decentralization in the United States and upon which the labor forces of American factories often depend for their journey to work, is and for some time will remain unknown in Egypt. In some instances, firms must actually construct housing estates for their workers, estates which share the drawbacks of all company towns. This task has now fallen to the government since the factories, even those constructed originally by private enterprise, are administered under the nationalization program. In other instances, where the public transportation system has not yet been extended, special company buses must be used to transport workers.

In essence, the modern, large-scale, decentralized factory, introduced at this stage of Cairo’s development, has imposed certain requirements which the society has not yet been able to meet. While Iraq one standpoint this modernization has solved a problem, from another it offers creative possibilities. One of the best proposals that has been very seriously entertained—and which figures prominently in the 1966 Master Plan—is that a series of satellite towns be constructed around these new industrial complexes. This solution would both relieve the factories of their present responsibility for providing housing or transport and, in addition, help relieve the center city of some of the ever-increasing increments that otherwise threaten to strain its already overcrowded residential and transportation facilities.

Not only industry but another of Cairo’s major economic bases, government, has experienced a dramatic shift in the scale of its operations in recent years. This expansion in the public sector has required a greater degree of land use specialization than was previously necessary. Again, the solution has been in the direction of the satellite town (this time adjacent, however, to built-up Cairo), within which the major government offices are to be concentrated, supplemented by residential and commercial quarters.

A number of problems have been raised in this section, for which no simple solutions exist. What is required is a balance between competing pressures. On the one hand, especially in the older quarters but also in the central portions of the newer quarters as well, the persistence of many small-scale enterprises has resulted in too much and too capricious an intermixing of land uses. On the other hand, too much rather than too little land use segregation is the critical problem on the periphery of the city, where a dramatic leap to very large-scale enterprises has created a reverse difficulty. If new and old quarters are to be fused into a unified urban community, policies to redevelop the older zones by sorting out land uses and assembling larger sites must go hand in hand with policies designed to provide the new peripheral zones with a fuller and more balanced complement of land uses. And these policies must, in turn, be related to plans for improvement in the circulation system itself. Opening access to the old city is just as essential as linking the new peripheral zones to the city core, if efficient land use patterns are to be encouraged.

One might with ease devote this entire volume to a study of contemporary Cairo’s “social” problems, for they both allow and deserve such treatment. However, upon reflection it is apparent that they have always been present, in one form or another, throughout the city’s history. Numerically they may loom larger by virtue of the heightened scale of urban concentration at Cairo, but the major difference is to be found not in scale but in the evolution of a philosophy of social welfare in which they have become identified as “problems” requiring solutions. This recognition of the “problems” is, in itself, testimony to the modernization of the city.

The case of housing can be singled out as an illustration of the magnitude and complexity of some of these new problems. Isolation of this problem is virtually impossible, since rapid urban growth, inadequate employment opportunities, low incomes, and the lack of adequate housing are all linked together in a depressing but indivisible chain of causation. To really understand and evaluate Cairo’s housing problem and its possible solution requires no less than an understanding of Egypt’s economic dilemma, which is again beyond the scope of our inquiry. Nevertheless, even a superficial discussion will alert the reader to the nature of the problem.

Throughout history Cairo has suffered from an inadequate supply of housing even by the most minimal standards. Some of the very earliest travel accounts remarked on the large numbers of city “residents” whose only bed was a doorway or street. Others noted the incredible densities at which Cairenes were housed, 250 or more persons crammed into the cubicles of a single “apartment” hive. While these conditions are now exceptions, standards of adequacy have gone up faster than actual improvements could be made. And, in addition, the enormous number of urban newcomers that Cairo has been called upon to absorb during the present century would have presented a formidable challenge even if standards and expectations had not risen in the mean-

90. Family-size commercial premise in al-Mā’ālaki, photographed in the 1930’s but unchanged today.
As modern standards of density have come to be accepted by Egypt's planners, the definition of the problem has been formulated in terms of a reduction in density. International comparisons may help to place this problem in context. In the United States in 1950, less than a percent of the dwelling units, urban and rural, were occupied at densities exceeding two persons per room, and even in urban Czechoslovakia, despite the enormous housing stock loss sustained in the war, only 28.6 percent of the dwelling units in that year were occupied to intensively. Thus, what is now the exception in Western industrialized countries is still the rule in Cairo. Nevertheless, it would be both unrealistic and economically self-defeating to attempt any substantial reduction in Cairo densities. This must be accepted as a problem whose solution must be put off until some of the underlying causes of it have been approached.

In the meantime, however, it would be desirable to prevent a further deterioration in standards, and it is legitimate to ask whether additions to the Cairo housing stock are now being made at rates sufficient to replace units lost through demolition as well as to absorb, at standards not inferior to those already existing, the new population increments that inevitably flow into the city. Evidence indicates that this has not been taking place and that, in fact, the trend of deteriorating density conditions has persisted into the 1960s. This can be simply stated. In 1960, slightly under 3,200 building permits were issued in the Governorate of Cairo for the construction of an additional 49,590 rooms. In 1961, the comparable figures were 3,275 building permits for the construction of 49,930 rooms. It is impossible to determine from these figures what proportion of the authorized rooms were designed for residential use and what proportion for industrial or commercial purposes, but even if we assume that all of them were actually built and all of them were for residential use and (neither is a valid assumption), their contribution to the housing stock would have been insufficient to absorb the new population added to the city in those two years, much less compensate for an unknown number of demolitions. Assuming a conservative population growth rate for Cairo of 4 percent per annum, some 176,000 additional residents in 1960 and another 140,000 residents in 1961 had to be absorbed. This was equivalent, at an average family size of 4.2, to adding 2,500 and 2,900 families respectively in the two years. If we can, for the sake of argument only, conceive of these newcomers being housed in these new rooms, the density of occupancy would have been 27.7 persons per room, i.e., considerably higher than the already-existing densities of the city. The evidence thus leads to the conclusion that the housing shortage in Cairo has not only
if adequate housing is to be provided for Cairo's population, it cannot be left to the economic market place. Direct government subsidy is inevitable.

Reorganization of the government's responsibility in this area has appeared only very recently in Egypt's long history. Prior to the Revolution of 1952, only one publicly subsidized low-rent housing project was constructed in Cairo, namely the "Workers' City" in Imbaba, consisting of some 2,500 dwelling units. Since the Revolution, construction of "popular" housing has become an essential element of government policy, in which the Ministry of Housing and the Ministry of Waqf have been vitally involved. Housing units for the middle class, are also needed, and several projects have already been executed to provide reasonable housing for the "salaried middle class," many of whom are government employees in Cairo. Whether these ventures will be sufficient to compensate for a reduction in housing offered through the private sector cannot be judged at this early date. Raising the housing standards of a minority of Cairo's low-income families without substantially adding to the entire housing stock may benefit a small portion of the population without contributing to a rise in general standards.

The foregoing remarks are not to be taken as a definitive statement of the housing problem, but merely as an indication of the nature of the new social problems coming to the fore as Cairo enters its second millennium. Even as older problems have been "solved," new ones have come to take their place which are, if anything, even more challenging than the ones which have preceded them. But the reader will note that the new problem areas somehow appear more familiar to him, that they strike a responsive chord absent in, for example, a discussion of the role of the mudasir or the awqaf, Cairo, as a contemporary city and the capital of an industrializing nation, now shares with other major cities throughout the world the pains and perplexities of the modern metropolis.
An Epilogue and an Introduction

All the problems discussed in the preceding chapter had more than tangential significance in shaping the form Cairo was to take in the twentieth century. Each, either directly or, more commonly, by default, affected the differential rates of growth in various quarters of the city and, by influencing the types of residential facilities available or newly provided, helped to bring about concentrations of persons with varying social characteristics in one district or another. While natural topographic and man-made technological factors circumscribed and channeled the explosive growth of the twentieth century into specific reservoirs, the social history of the community and the existing types of institutional forms acted more directly to distribute population within the metropolis and to give to each quarter its own unique functions and its own characteristic inhabitants.

Thus, decisions made by the autonomous concessionaires who built the tramlines served to encourage urban development in certain directions while consigning land off the major routes to continued agricultural exploitation. In a similar manner, decisions made by other foreign companies concerning the extension of service utilities into certain quarters enhanced the attractiveness of those zones—but only for a special clientele. The uneasy developments in mortgage financing coupled with the specific values of the investors, in similar fashion, shaped the kinds of subdivisions that flourished in the newly opened zones, serving, with the sole exception of Helwan, to fragment the newer additions to the city into tiny and uncoordinated patchworks of intensive construction. The small scale of private developments precluded coordination, a tendency that was compounded by the lack within the municipal superstructure of home rule and the attendant powers over land use necessary to guide development within an orderly pattern.

Lack of conscious control over development, however, did not mean capricious, intransigent. In ways, the absence of planning allowed the subconsonantal forces full play, and from their operation evolved a pattern within the newer parts of the city which was nonetheless marked for having been unplanned and which was clearly related to the divisions and specializations within the urban structure that were already apparent at the turn of the century.

In the older portions of the city, as well, the factors we have called "problems" in the above discussion served as "forces" which molded these historic quarters, condemning some to stagnation and further decline, encouraging the metamorphosis of others into shoddy Western imitations. Even the housing problem, that is, the lack of residential facilities for many of the new migrants to the city, returned its own ingenious solution, namely the conversion of the cemetery zones into residential quarters, thus expanding the population of the living city into areas which no plan could have foreseen.

Most of these changes had an air of caprice about them. Here, a decision of the Tramway Company led to an upgrading of some small linear strip within the old city; there, the accidental distribution of swap-encumbered property led to a further deterioration of another section; here a shift in the methods of production in a certain industry led to its relocation, while the persistence of traditional techniques in others left a residual concentration in an older quarter; sometimes a politically motivated expulsion or restriction of some ethnic group resulted in residential succession in one subarea but not in adjacent ones. These are only a few of the many types of random influences that played upon the structure of the old city during the fluid years of the twentieth century. But again, despite the unplanned nature of the changes and the often accidental impetus that activated them, the most impressive fact to be observed is that continuity far outweighed drastic shifts, and that a knowledge of an area's earlier history enables one to predict quite accurately the general direction of change. Only occasionally has that direction been altered by a more recent opposing force.

The essential purpose of this book thus far has been to provide the reader with sufficient background to understand the city of Cairo as it is today, to see each part of the city as a subarea sharing much in common with the rest of the city but also retaining with remarkable persistence its own distinguishing characteristics—characteristics that mark it off as a relatively independent "natural" area. The present structure of the city is so tied to its past historical development that, for any given subsection of the city, to know the period in which it was first settled and to know the social and ethnic characteristics of its earlier residents (or, in the case of the most recently settled zones, the social and ethnic characteristics of the older part of the city out of which it radiated) is to know a good deal about its present inhabitants, and to be able to predict quite accurately many elements of its physical appearance. In order to complete the prediction, however, one needs also to know the relationship of each subarea to the transportation network of the city and, further,
to know any special modifying or extenuating influences, particularly of an institutional nature, that made the area more or less responsive to the crosscurrents of stability and change that operated within it.

While this has been, perhaps, a relatively long introduction to the central purpose of this volume, we are finally ready to proceed to an analysis of contemporary Cairo. In this analysis we shall be able to employ not the fragmented verbal accounts of history—which often leave unanswered many of the most crucial questions—but the fuller, though still incomplete, records of the decennial censuses of Cairo. These records allow us to trace quite precisely the vicissitudes of the various quarters of the city and to measure growth and transformation in those peripheral areas of more recent settlement. Population figures, combined with an "imaginative reading" of specially computed indices of socio-economic status, of family life, of social organization or disorganization, and other indicators of differences in the way life is lived within the city's various quarters, can give us a new way of examining the complex structure of the modern city of Cairo and of abstracting from that complexity the underlying simplicities and patterns.

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The Emergence of the Northern City: Comparative Growth Rates

Archaeologists have long used the strata of human and natural deposits to "peel the onion" of history and to assign responsibility to items within the same stratum. I propose to use this same approach but to reverse the procedure by using known historic developments to separate the series of urban accretions that, in the aggregate, constitute the present city of Cairo. For, just as the dimension of depth lays bare to the archaeologist distinctive, successive strata of time, so the horizontal dimension of surface space reveals to the urban ecologist the successive models of urbanism, each conditioned by roughly similar factors, that have followed one another in Cairo's progression from desert encampment to modern metropolis and which, to a limited extent, still stand side by side in the city of today.

We have already noted that, by the end of the nineteenth century, Cairo consisted in reality of two major suburbs, more or less independent, plus a stillborn appendage to the south. By the middle of the twentieth century a third and new city had been added to the original complex, chiefly (but not exclusively, for here any simple scheme breaks down) to the north of the existing areas of settlement. Each of these cities was formed in the crucible of a different technology and was shaped by a different principle of social organization—which tended to confer upon each a fairly distinctive set of general characteristics. Thus, if the technological foundation of the first (the medieval core) was animate energy while that of the second (the colonial town) was steam, the energy that powered the third into existence was electricity. And if the organizing principle of the first had been religion and, within the Muslim majority, ethnicity, while that of the second had been the mutually repelling polarity between native Egyptian (Orient) and foreigner (Occident), the principle which governed distribution of population within the third city was chiefly economic—with rich and poor increasingly segregated. In many ways, these three models of urbanism still coexist in the city of Cairo, supplemented by a rural infusion about which more will be said later. However, time and process have tended to blur the boundaries between the three and to secrete transitional strips where once there had been unbridgeable barricades.

The three major geographic divisions of Cairo, then, constitute a basic framework within which the smaller subdivisions of the city fit (see Map XV). While to know the general character and historical development of these larger components is not to know, a priori, everything about the smaller quarters which comprise them, an understanding of the smaller "natural areas" can be gained in detail until the broader conditioning units have been understood.

The deepest stratum upon which today's city is built is the medieval. (As we have seen, settlements predating this period have disappeared, leaving as a cenotaph only some unstable mounds and the refuse of generations.) This intensively developed medieval "core city" is what will be referred to hereafter as the Eastern City. It is chiefly the elongated irregular rectangle that stretches from the Husainiyah projection just north of the Bab al-Nasr and Bab al-Futuh southward to and including the Citadel and the Mosque of Ibn Tulun. On the west it is bounded roughly by the course of the Khalil Street (for the canal is but a distant memory for the oldest inhabitants), while on the east it fades into the desert. Included also in this zone is the projection west of the Khalil that encompasses the area originally occupied by the Faiyum port of al-Maqd and, with a leap and a break in contiguity, the former port of Bulak, no longer literally but still figuratively an island with social and historic affinities to the Eastern City.

The agrarian (districts) of Cairo that comprise the Eastern City are: al-Jamaliyyah, al-Darb al-Ahmar, the northern portion of al-Khalil, the southern part of Bab al-Sha'riyyah, and the eastern bank of Bulak. Because these districts cannot easily be subdivided in the early censuses, the totals for each qima (district) will be combined to trace the growth of the Eastern City. However, it should be borne in mind that, as the recent period is approached, some of the totals are deceptively large since they begin to include portions of the nonmedieval fringe, i.e., the cemetery quarters to the east and south whose growth as residential zones dates essentially from the twentieth century. In a later analysis these developments will be treated separately.

Just west of the Khalil begins the neo-medieval stratum, a narrow transitional belt parallel to the Eastern City. While it was originally settled in premodern times, its development was so impermanent and spotty that it was easily transformed into a more modern type of urban quarter when the need arose. Its transformation was facilitated by the ease with which older buildings could be displaced or supplemented by new additions dating from the last century. The qima of al-Mitski lies entirely
within this belt, as do the easternmost portions of "Abīlīn and Saydīlah Zayyān, their combined extent comprising a triangular expanse near the edge of the Sāfī ridge. The heat of the Western City, or what might be termed the post-Renaissance or Baroque stratum, occupies the land west of this transitional belt, almost to the river's edge. The agglomerations of Rawd al-Faraj, and Mīr al-Q̄adīlah, the major route leading to Mīr al-Q̄adīlah, which was the westernmost street laid out in Ismā'īlī's addition to the city. Beyond this core—along the river—lie the isolated villages of Rawd al-Faraj and az-Jāzbīlah in the center of the stream, and beyond, along the shoreline of the river's west bank—lies a final addition to the Western City which dates from the twentieth century. At this point in the analysis the transition belt, the Baroque strip, and the modern quarter will be combined and treated as parts of the Western City, although in a later analysis these substrata will be distinguished more carefully. Thus, in addition to the agglomerations listed above (al-Mūtūs, Abīlīn, Saydīlah Zayyān), the districts of Ashabīyah, Q̄asr al-Nil, as well as the western shore of Rawd al-Faraj, are combined into the unit referred to as the Western City. This rather simple division of the central portion of contemporary Cairo into two lateral halves, an eastern and a western, accounts effectively for all parts of that zone except the two discrete medieval ports of Rawd al-Faraj and az-Jāzbīlah. Rawd al-Faraj has already been assigned to the medieval stratum and so perhaps should Mīr al-Q̄adīlah. However, the isolation, until very recently, of the latter quarter and its combination with the agricultural belt and to fill in the Baroque quarter, for in the Western City (including neo-medieval-Mūtūs) there were almost 130,000 inhabitants, accounting for almost a third of the city's population. Mīr al-Q̄adīlah, the aborted Southern City, contained 23,998 persons, a somewhat inflated total achieved only by adding the farmers of the southern agricultural fringe to the more urban populations of the Q̄asr al-Nil and the former az-Jāzbīlah some 1854. In the enormous stretch of the Northern City, virtually untouched by urban development except in the southernmost tier adjacent to the older cities, there were only 34,000 residents, most of whom were simple agriculturists who were essentially not residents of the city. In the Western City, the boundary, they had been accorded the dignity of being called muddanīyah (literally, "city dwellers" but connoting "civilized").

This situation has been destined to change rapidly in the decades of modern expansion but between 1883 and 1897, when conditions of growth did not alter basically, the same relative strengths remained evident. The medieval stratum contains to house the major share of the city's population. By the latter year some 326,000 of the city's 900,000 residents, or 54 percent of the total, were found in these older quarters, all but one of which experienced substantial growth during that period when many of the "important" families removed themselves to the new sections of the city, permitting the conversion of their former homes into shops and small residences. Moderate growth was registered in the Western City, where the population increased to almost 160,000 (27 percent of the total), despite the proliferation of commercial developments that added days but not night-time popula-

5 Note must be taken here of a major change in the boundary of Cairo and also of certain discrepancies in the reports of various censuses. Between 1967 and 1971, a large portion of the land on the wesern bank of the Nile was added to the city's jurisdiction, increasing its area from about 100 square kilometers to about 150 square kilometers. The incorporated population that resulted, however, was far less than the increment in land, since the sec-

6 "Cairene" as defined in this work is limited to the central portion of Cairo as defined by the 1960 census. This work has been designed to be inclusive of all Cairenes who, in 1960, were residents of the city, at least in so far as access to this document will be adequate. The Cairenes are divided into their various strata. The "Annals of the" (which defined the Cairenes in the same manner), the population of the city is significantly greater than the official count. However, the new number cannot be recovered, due to the varied reporting of the population counts for years given as successive censuses. The
saturated level and a low ebb in attractiveness, for it had become an area of out-migration at least of apparent stagnation. (Later events were to prove it not dead but merely dormant.) The population in that zone was, at the end of the decade, no more than it had been at the beginning but, because of the intercesses elsewhere, this represented a decreased proportion of the total. By 1957, only a third (34%) of the city's population lived in the Eastern quarters.

The reasons for this are not difficult to discover. The economic prosperity of Egypt was fast disappearing and the monopoly which the medieval city had retained over the industrial structure of the city was beginning to vanish under the impact of changing technology. A dual urban economy began to appear in the Cairo of the 1920's, in which preindustrial firms shared the productive system with a newly evolving modern sector (then still confined to commerce but destined to spread to industry as well). As recently as 1927, one out of every four Cairoites engaged in the textile industry lived in the district of al-Jamāliyyah (where the shops were concentrated) while other large minorities lived and worked in Bīb al-Sharī'iyah and al-Khalīfah—all parts of the medieval city. Metallurgists were concentrated in the districts of Būlik, Bīb al-Sharī'iyah and al-Jamāliyyah, while al-Darb al-Ahmar (another medieval core district) housed a significant portion of all workers engaged in the important industries of "dress and toile." Mīr al-Qădīmīn contained a disproportionate share of the labor force engaged in ceramics and leather goods while woodworkers were concentrated in Būlik and Bīb al-Sharī'iyah.

By the 1920's, a small but growing modern sector of the Cairo economy had already been established and was in the process of being "indigenized," i.e., participated in by more than the foreign community. This trend continued even through the depression and, by 1937, it was evident that the structure of Egyptian industry was undergoing upheaval. Handicraft methods, though still existing, were being supplemented more and more by mechanization, especially in the new industries being introduced. This economic transformation helped to seal Eastern Cairo's fate and to condemn her to decline by depriving many of her residents of their traditional livelihoods and creating opportunities for others elsewhere. In other words, new industries were being introduced and to those newcomers who otherwise might have been absorbed into the traditional urban economy.

In 1927 it was decided to extend the preceding decade of expansion, the city registered only moderate gains during the economic crisis that dominated the 1927 to 1937 decade. But, significantly, those smaller gains did make for confined totally to the newer parts of the city. The medieval core of the Eastern Cairo appeared to have reached both.

In contrast with the preceding decade of expansion, the city registered only moderate gains during the economic crisis that dominated the 1927 to 1937 decade. But, significantly, those smaller gains did make for confined totally to the newer parts of the city. The medieval core of the Eastern Cairo appeared to have reached both.

ERUPTION OF THE NORTHERN CITY

In contrast to the Eastern City's stagnation, the Western City continued as before to enjoy healthy growth, while the expansion on the Northern City's fringes was spectacular. The population of the former grew to almost 390,000, while that of the latter approached 450,000, almost exactly equaling the population of the Eastern City. Modest growth was also registered in the Southern City, but this was due not to indigenous factors but to the expansion of physically discrete suburbs whose development was tied to the new "commuter" train connections provided by the Cairo-Hurghada railway. The year 1927 marks a watershed in the internal pattern of shifting dominance, as can be seen in Charts II and III.

The decade including World War II ushered in a city much altered in scale and quality. If the decade spanned the turn of the century marked one critical moment of discontinuity, certainly the decades at midcentury witnessed an even more profound alteration in the nature of the community. The change in scale—perhaps the most easily perceived transformation. By 1927 Cairo contained more than 2 million inhabitants, having added within the preceding decade of unprecedented expansion close to 100,000 more persons. This increment alone was roughly equivalent to the total population of Port Said, Tanta, Mahalla al-Kubra, Suez, Mansūfār, Ayūd, and Damānītūr, the third through ninth largest cities in the country in that year.

Where could this population go? Given the wartime restrictions on construction, it was perhaps inevitable that many of the newcomers should find their way into already densely settled areas where housing was, if not inadequate, at least cheap. By the end of the decade, close to 500,000 persons were living in the old Eastern City where previously only 490,000 had lived, already tightly packed, at the beginning. Furthermore, this population had pushed or been expelled into the surrounding cemeteries zones which, despite their lack of water and sewage systems—not to mention such "luxurious" community facilities as schools and medical treatment centers—gave shelter to almost 900,000 "marginal" inhabitants.

In the Western City a similar intensification of land use and occupancy permitted 512,000 residents to live where only 350,000 had been ten years earlier. While some of this increase represented a " cousins" the city of the Western bank, most was achieved either through the construction of taller apartment houses on the eastern shore and on the islands or through flat-enveloping. The latter phenomenon resulted in quick deterioration, especially in the zone just east of the Sharīʿ al-Qurʿ al-ʿAyn, which increasingly began to mark a critical boundary between status zones. Most of the new construction, however, was concentrated as before in the Northern City, which also began at...
Emergence of the Northern City

This time to share some of the high density conditions that plagued the rest of the city. By 1947 this city contained close to 800,000 persons, an increment of almost 350,000 during the decade. Not only in density but in other characteristics as well the Northern City was beginning to lose some of its uniqueness. When the area had first been developed, it attracted a diverse and highly attrillaral population. For example, in 1927 only 70 percent of its residents were Egyptians. Many newcomers, of course, were agriculturists; the urban population consisted disproportionately of native Christians (Copts) and of foreigners. By 1947, due to an influx of newcomers, many of them rural migrants who differed in income and ethnicity from the original settlers, the zone, while remain-
inhabitants scarcely exceeded those in the medieval core. Even with the new and projected housing projects that daily take on more concrete form in the residual rural fringe, to the south, the city has a limited future role in the ecology of Cairo.

In marked contrast to the relative decline of the two older cities was the continued growth of the Northern City which, by 1960, could claim with a fair degree of accuracy to have become the real Cairo, even though her undistinguished architecture and nondescript streets kept her still virtually invisible and off the beaten track for most outsiders. Ask any visitor to Cairo today to describe the city and he will tell you in great detail of the Western City that fulfills most of his commercial and residential needs, and of the Eastern City that fulfills his equally compelling cravings for the exotic Orient; he will probably forget even to mention the Northern City, despite the fact that by 1950 it already contained close to half of the total population of the city, a lead which continues to increase!

The expansion of this zone in the past few decades represents a truly remarkable transformation in the ecology of the city for which none of our earlier incursions into history has prepared us. The region doubled in population in only thirteen years, increasing from a little under 80,000 in 1947 to in excess of 1,500,000 in 1960, and its growth seems only to have begun. To the north of the settled sections are located some of Egypt’s most advanced and largest industrial establishments, many of them clamoring for additional subsidized low-income housing for their growing labor forces. At the edge of the eastern desert, in the vacuum between Abbdissya and Helipolis, the new town of Nasr City is being constructed which, when completed, will contain dwellings for half a million inhabitants as well as most of the government ministries, a vast commercial and recreational core, a new campus for al-Azhar University, and a zone for industrial development.

Recent building permits can be used to estimate relative growth rates since the Census of 1960 (see Table 6). Of the nearly 7,000 structures authorized by the Governorates of Cairo between July 1951 and April 1965, only about 249 were slated for the central zone of the city, both east and west, while another 49 were for structures in the newly revived Southern City at Midr al-Qasimah. The fast-growing southern satellites of Maadi and Heliopolis were the location of another 1,245 of the building permit applications. The remaining 4,475, or fully two-thirds of all permits issued, were for apartment houses, villas, shops, and factories to be located in the Northern City—persuasive proof that the trend of northern expansion remains strong.

Nor is the available land in the north anywhere near exhausted, for there still remain substantial pockets of fertile farmland whose future disposition is not difficult to forecast. Despite the remarkably farsighted concern of Cairo’s planners in trying to preserve this valuable green belt, which supplies much of the truck-gardening requirements of the city, it appears inevitable that the pressure of urban growth will continue to push the frontier deeper and deeper into the soft, virgin desert, possibly even as far north as QasrIh. The peculiar physiognomy of the land continues, like a vise or an iron mold, to force growth northward. Cairo had once been compared, in a flight of poetic fancy, to a diamond glistening in the handle of the Delta’s wide green fan. To many an alarmed contemporary observer, she now seems more like an unsuitable cancer threatening to devour the hinterland that feeds her.

If the nineteenth century unfolded the story of the Western City, the present century’s story belongs properly to the Northern City. In the space of less than half a century a new city came into existence that contains, at the time of this writing, more than a million persons living on land that was, prior to World War I, almost entirely innocent of urban forms. Neither historical enurcations nor conscious planning served to mold or guide its development pattern. Growing in response to the manifold impulses generated by modernism—the muscular power flexed by industrialization and the
Northern City contains a population that spans almost the entire spectrum of Egyptian urban types and shelters within it a vast variety of neighborhoods characterized by distinctive life styles. Stretching northward from the center of the city are at least five sectors, each completely different from the other, reflecting the contrasting worlds of contemporary Cairo. Furthermore, despite the surface architectural resemblance of this new city to metropolitan communities elsewhere, the impress of culture has been deep. The Northern City, while perhaps lacking the exoticism of the medieval core and the declared elegance of the Westernized central business district, remains nevertheless distinctively Egyptian. It represents, however, as we shall see in the next chapter, an Egypt newly emergent rather than the Egypt of the past which has been the object of our study thus far.
Given what we know concerning the ways people "divide up" cities, our knowledge of Egypt's present diversity would prepare us to expect the constancy of many very different "cities within the city." This theoretical expectation is easily confirmed visually, even for the most uninitiated and casual visitor to the city cannot help but be struck by the rapid succession of urban rights that meet his eye as he traverses the city. It is a simple matter to acknowledge the existence of a Cairo mosaic; it is, however, a far more complex operation to summarize it by objective methods and to set forth the essential characteristics that distinguish the parts from one another. This, however, must be done if the city is to be understood.

A DIGRESSION ON METHOD AND MEANING

There are a number of equally valid ways to dissect a city and to subdivide it according to varying sets of criteria. The method ultimately selected depends essentially on the goal or goals of the investigator. For example, geographers conventionally classify suburbs within the city according to the dominant uses of land; sociologists, on the other hand, are concerned with the social organization of the city rather than its physical plan and prefer to classify areas according to the dominant or "typical" characteristics of its residents. I have adopted the latter approach since my ultimate goal has been to identify those large segments of Cairo where residents share common social characteristics and follow particular life styles that mark them off from residents of neighboring communities, with whom they seldom interact. Within these "social worlds" there may be a wide variety of land uses which further subdivide the communities into smaller, more specialized quarters.

Just as there is nothing especially sacrosanct about the method and approach selected, there is nothing mystical or invariant about the final division. An investigator whose goal is to subdivide the metropolis into as many small, homogeneous and cohesive neighborhoods as are subjectively perceived by their residents might need to distinguish many hundreds of subareas in order to describe adequately the social worlds of Cairo. My goal has been a different one. It has been to synthesize out of the multitude of the city's tiny cells and quarters the maximum number of major components necessary to account for basic social divisions within the city. The purpose in so doing is to relate these divisions to past patterns of growth and to suggest the direction of future changes in the metropolis. For this goal, the thirteen "cities within the city" which I have differentiated statistically represent a compromise between the infinite fragmentation that would have resulted, had every minor variation within the city been retained, and the too-gross generalization that would have resulted from treating Cairo as if the city were a unified or undifferentiated whole.

Because I believe so strongly that the product of an ecological "dissection" cannot be understood, much less evaluated and used, without reference to the methods that have been employed to arrive at it, I must, before presenting the results and their interpretation, digress a bit to describe briefly the techniques used to identify and locate the thirteen subunits of contemporary Cairo. Technical details of the various stages of the study are contained in an appendix to this volume and to the fuller exposition available in another work.6

My first attempt to investigate the ecological organization of Cairo began in 1958 and was based upon the returns from the then-current Census of Egypt, 1947. Volume Fifteen of the series contained data for the Governorate of Cairo, including, in addition to the summary tables, four highly complex sets cross-tabulating a limited number of variables (such as age and sex, marital status, education, employment, family size, etc.) by the 16 census tracts into which the city was administratively divided.8 A set of summary statistical measures (or indices) was devised, utilizing data contained in these tables, to capture significant dimensions of social differentiation within various quarters of the city. The results of this early study, including the statistical data processed for each census tract, maps showing the distribution of each variable in terms of the urban pattern, and computational formulas and explanatory notes for each of the charts, have been published in J. Abu-Lughod, "Testing the Theory of Social Area Analysis: The Ecology of Cairo, Egypt," American Sociological Review, Volume 34 (April 1969), pp. 598-612.8


8 The source volume for all 1947 data is the Arabic edition of Kingdoms of Egypt, Ministry of Finance and Economy, Census of Egypt, 1947, Volume 15, Governorate of Cairo (Government Printing Office, Cairo: 1953). The four relevant tables cross-classifying census information by census tracts are to be found on pp. 56-60. Administratively, the city of Cairo is divided into districts (ạimail, pl. adami) which are further subdivided into tracts (ṣubḥ, pl. ṣubḥān). These roughly correspond in administrative function to the wards and precincts of an American city and are the units of political representation and police protection. They differ from American census tracts in that they are usually more than statistical units. Some, especially in the oldest quarters of the city, are physically and functionally derivative from the ancient khalis and durbā which have had a long tradition of social cohesion.
The major difference between the present study and the earlier one, however, was a radical improvement in the methodology achieved within its particular context. I had followed conventional procedures by preparing separate maps showing the geographic distribution of each of the variables, as if they were independent of one another. These were to be visually superimposed in order to abstract from the congruencies those sections of the city (usually misnamed "natural areas") which appeared to contain populations with similar characteristics. Con- tiguous censing tracts of roughly comparable "quality" were to be grouped together and distinguished from adjacent zones where populations with different characteristics appeared to be living. This was a time-honored method that had been used in virtually all prior ecological studies employing census data.

For many years urban sociologists had been aware of certain defects inherent in this method but had been unable to devise a satisfactory alternative. It was recog- nized, for example, that subjective judgment was called upon to play too large a role in the determination of the number of districts and their boundaries, and that two investigators inspecting the same set of maps might reach quite different conclusions concerning the number and location of the subareas. Furthermore, stimulated by the formulations of the social area analysts after 1955, several empirical studies had been made in American cities which indicated that very often the suggestion that it for the same city might be devised, depending upon which clusters of variables were selected for mapping. At least three separate clusters or dimensions had been iden- tified, each of family, and ethnic composition—each of which appeared in American cities to yield its own typical pattern of geographic distribution. Earlier methods had assumed unidimensionality.

One final point should be made. In a statement with conven- traditional ecological techniques was the development of an alternative approach which was set to meet some of the objections concerning subjectivity and multidimensionality. This was factor analysis, which received its first successful application in the social sciences in the 1940's with L. L. Thurstone's investigation of mental capacities. Although as early as 1941 such a technique had been adapted to the ecological problem of delimiting homoge- nous economic regions in the United States, the suggestion that it might prove equally valuable in analyzing the ecology of urban areas was not followed until almost twenty years later, after the social area analysts had thrown into serious question the assumptions underlying more conventional methods. Thus, the present study has method of factor analysis been used to analyze the ecological structure of cities outside the United States, of Frank Swezey's study of Helsinki and mine of Cairo are among the first. Quite comparable methods were independently developed by the several investigators. In brief, factor analysis identifies mathematical vectors capable of accounting parsimoniously for the relationships and independences observed among many simpler variables. A factor is, therefore, a hypothetical "force" underlying and presumably accounting for the variance common to several variables which are highly correlated. A separate general or group factor is hypothe- sized to account for each relatively independent cluster of intercorrelated variables.

When this technique is adapted to ecological research, each census tract is treated as an individual (having certain characteristics measured by the indices). Correlation coefficients are computed between each and every index, yielding a matrix from which factors are extracted seri- ously, each factor "removing" a measurable amount of the matrix's variance. The factors so extracted represent inde- pendent (orthogonal) forces but the analyst may choose to manipulate (rotate) their location in conceptual space in order to improve the usefulness of his factor solution. In addition, the factor matrix gives the most important accounted for about half of the variance of the city. This was the factor used to divide the city of Cairo into thirteen subunits.

The results of factor analysis are presented in the form of a table of the "factor weights" (which may be thought of as the degree to which the separate variables correlate with the postulated factor) of each separate em- pirical cluster contained. The rotated factor matrix is a portrayal of the manipulation of these entries and those contained in the original correlation matrix yields a method for weighting the value of variables in the individual census tracts in order to sort each tract on each factor. Those factors are standardized, in order to place each in the standard deviation of the distribution around the mean for all census tracts in a city, a technique which permits rather precise comparisons between census tracts in a city within the framework of the total city. The cities can also be used during 1964-1966, so that Swezey's work came too late to offer material assistance.
had their roots in the nineteenth-century cultural bifurcation and even more in the insulation of the colonial period, a larger percentage of these residents than would be expected by chance alone carried foreign passports or professed a religion other than Islam. However, since the Revolution of 1952 and the sizeable exodus of foreigners in 1956 as an aftermath of the Suez War, these zones have become more properly the domain of the indigenous upper and middle classes of the city.

At the opposite end of the scale are those census tracts, and the composite subsidies to which they belong, with extremely low Factor I scores. By maps one can determine that these are located almost exclusively at the urban periphery of the metropolis; by reconnaissance one notes that they are more rural than urban in their appearance. Instead of the steel-geared cement apartment buildings characteristic of the modern quarters, one finds lower, mudbrick or crudely fired brick dwellings, occasionally plastered over, gathered into small village-like clusters whose appearance is more reminiscent of rural settlements in the hinterlands than of any city, whether medieval or modern. Within the dwellings, furnishings are minimal—a few mattresses and quilts, some cooking pots, several glasses for tea, perhaps a trunk or two. Space is too valuable to be wasted in storage, for often one or two rooms must accommodate a family of ten or more. Commercial premises are infrequent and minimal, confined to providing the narrow range of necessities that corresponds to the limited buying power of the focal residents who exist near marginal subsistence levels. The women in these zones, almost without exception, are attired in the same long black gowns, bright head kerchiefs and supplemental ink shawls that adorn their country cousins. The men still wear the flowing jallabiyyah during leisure, even those who strip to underwear to work in the fields or who may be required to wear uniforms or wrinkled trousers for more urban work. Only a minor percentage of these men can read and write, and it is a rare handful per hundred among the women who can do even this much. With little or no formal schooling to interface with other life plans, men and women marry young, most of the men by the time they are twenty; virtually all of the girls by the age of sixteen. Early and sustained childbearing preoccupies the women, as attested by the extremely high fertility ratios in these zones—even higher than in the villages of the hinterlands, thanks to the greater availability of medical facilities in the metropolis. The men work at low-paid diverse jobs requiring little skill; only a few still farm full time, though some may supplement insecure employment by part-time farming. Until recently it was a rare child who attended school, and even now with the new compulsory education

laws the frequency with which girls are "overlooked" and the early ages at which most children disappear from the school system means a very low rate of school enrollment. The style of life in these quarters, then, despite their location within the urban boundaries of Cairo and despite the fact that farming no longer offers a livelihood to many residents, remains close to the rural model.

Between these two extremes are ranged most of the other variations within the city. Toward the bottom of the scale, although considerably above the rural fringe, are those areas nearer to the center of the city in which one still catches glimpses of a traditional style of urban living linearly descended from medieval Cairo, sustained by a dying economy based upon hand production, tiny scale of enterprise and inventory, and highly personalized relationships between proprietor and client. Toward the midpoint of the scale are areas of more modernized proletarian character, whose residents are moving into the wider realms of complex technology and industrial organization while still clinging to more traditional patterns in their homes and families. Somewhat above them socially are areas that help further to bridge the
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cultural gaps between old and new, dying and emergent, poor and rich. These are the variations to be explored in the section that follows. Throughout, however, it must be borne in mind that the statistics represent real people and are only significant in the context of their actual behavior and beliefs. Therefore, in this analysis of Cairo, I shall attempt to tread a devious course, moving alternately between statistical abstraction and sensual reality, between numbers and maps and the more subjective descriptions to which they correspond.

THIRTEEN CITIES WITHIN THE CITY
Cairo is subdivided, according to Factor I which isolates style of life differences and which serves as an indirect indicator of Weltanschauung, into thirteen major subcities, whether "natural social areas" or not, each of which contains a population distinctively different, on the average, from that inhabiting the adjacent zones. As has been indicated, these differences in population characteristics are paralleled by differences in the physical appearance of the quarters, in the kinds of housing and shopping facilities available, and even in the dominant dress that adorns the inhabitants and perhaps symbolizes their belief systems.

Map XVII shows the boundaries of these major districts, as they have been delineated by combining adjacent census tracts with comparable 1960 Factor I scores. Each city is identified by an arbitrarily assigned and colorless numeral, but nothing could be more vivid than the variations in life patterns contained in these numbered districts. Nor is their location within the metropolitan complex the result of arbitrary or capricious assignment. As will become increasingly clear, the character of each of today's cities within the city is inextricably linked to the developmental history of Cairo and to the successive transformations through which Egypt has passed. These trends also hold the key to the future, for the Cairo of tomorrow will be comprehensible only as an extension and modification of today's metropolis.

9. The Khuusiyah quarter, just north of Bāb al-Futūh, a northern extension of Community X

100. View of the southern part of Community X from the roof of the Ibn Tulun Mosque

Further to the south one notes a deep indentation, where the transitional belt (Community XI on the map) impinges upon the older quarter. Here was the site of the Birkat al-Fil, around which the Mamluk amirs had built their sumptuous homes. The last surviving remnant of this lake was filled in only late in the nineteenth century, and nothing remains of former glory save a few palaces, dating from the last century, which are now used for schools and museums. In place of earlier landmarks are apartment buildings constructed to house modern bureaucrats who have sought residences convenient to the large governmental zone due west.

At its southernmost extremity, Community X encompasses the somewhat squated residential and open-market zone that lies at the foot of Sūlīb, al-Din's Citadel, still perched on a spur of the Muṣṭaṣṣim. Mounting the slopes, where rioting Mamluks often rose in protest, are newer barricades housing a modern and more disciplined army, and crowning the top is Muhammad 'Abd al-Latif's ostentatious copy of an Istanbul mosque. At the base of the Citadel, however, the district curves to the west to envelop the bustling quarter that now crowds against the only surviving fragment of Ibn Tulun's pleasure dome of al-Qasr—his solemn, hollow mosque. It extends beyond, almost to the place where Baybars' famous Lion Bridge once spanned the Khālij at its sharpest bend (a point now marked approximately by the Sayyidah Zaynab Mosque).

Along the eastern edge the medieval quarter terminates abruptly and almost regularly at a dusty edge where once Sūlīb al-Din's wall had held the line against the encroaching desert and where, even earlier, the Fatimid conquerors under Jawhar had once dug a moat.

The people who now live in this cattalo shell of another age have more in common, however, than their physical legacy, even though they can scarcely be confused with the romantic figures who populated the imaginary city of a thousand and one nights. Gone are the caparisoned horses and their militant riders, gone are the prankster dervishes secreted behind their mashrabiyah windows or borne in closed silk lanterns to the baths on ladies' day; gone, in short, is the ruling elite which this city once existed to serve. Only the servers are left, providing goods for each other's demands or those of villagers in town for the day, or the week, or for life. Tradesmen whose ancestors perhaps fashioned the opulent necessities of Mamluk households now cater to new patrons—the tourists. The destitute, once dependent upon the coin-scattering largesse of rulers and the food and lodging provided by muqaf endowed charities, now seek alms from casual passers or pensions from the government. The gangs of the street are reorganized for pocket-picking, shoplifting, and cigarette-butt scavenging. Only momentarily do optical illusions transform that white-turbaned shaykh into Sultan Muṣṭaṣṣim on his way to pray humbly for a full flood to end the famine, or that surly policeman examining a scale into an agent of the muhādib, or that hurrying veiled girl into a slave carrying a secret message from her mistress to her anxious lover around the corner. All is changed, but ghosts still linger.

To capture both a sense of the past and an overview of the contemporary state of the medieval city, one should simply traverse the entire length of the oldest surviving and most important street from the Middle Ages from its origin at the Bāb al-Futūh at the northern wall to its southern extension that reaches the foot of the Citadel. This was the Qasbah along which stretched the markets enumerated by Muqaf and along which marched the processions of centuries. Only vestiges remain of the warehouses, inns, shops, and workshops that once aroused the awe and envy of every visitor.

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101. Al-Jamā'iyah in Community X. Dome covers museum of Sultan Qalāwūn
The contemporary metropolis.

Intricately woven into the fabric of the city is the Al-Azhar Mosque, a symbol of the rich cultural and religious heritage of Cairo. Its grandeur and majesty are a testament to the blend of the past and present, where tradition meets modernity.

A bustling, vibrant market surrounds the mosque, teeming with life and activity. Vendors display their wares, from clothing to spices, each stall a gateway to the local culture. The aromatic smells of sizzling food fill the air, drawing in the hungry masses.

To the immediate left of the mosque stands the Al-Jazzar Tower, a historic monument that has stood the test of time. Its ancient structure serves as a reminder of the city's storied past, a silent witness to the ebb and flow of history.

Beyond the mosque, the landscape unfolds, a tapestry of gardens, parks, and boulevards. The riverfront promenade, a popular leisure spot, offers panoramic views of the Nile, its waters gently lapping at the shore. People stroll along the promenade, soaking in the peaceful ambiance.

Further into the city, the Cairo Tower stands tall, a modern landmark against the backdrop of the city's historic skyline. It serves as a beacon, guiding the way through the labyrinth of streets and alleys.

The metro system, a lifeline for the city's residents, crisscrosses the urban sprawl, offering a quick and efficient means of transportation. Trains whistle past, their rhythmic sounds a melody of life in the metropolis.

As the day draws to a close, the city transforms into a symphony of lights. The mosques, bathed in warm hues, glow like sentinels of faith, their minarets reaching towards the sky. Gastronomic delights fill the air, with the scent of shawarma, falafel, and more wafting from the numerous street vendors, creating a culinary carnival.

Cairo, with its multifaceted beauty, remains a city of contrasts, where the past and present coexist in harmonious balance. Its allure lies in its ability to captivate, to mesmerize, to leave a lasting impression on all who visit.
109. Underneath the history, a residential slum

Three main observations can be abstracted from these kaleidoscopic impressions. First, the district is poor, a slum not only by Western but by Egyptian standards as well. Second, the area is traditional but it is also undeniable urban, albeit in a non-Occidental fashion. Residu-
uals from urban life in the Middle Ages there may be, but residuals of rural life cannot be found. Third, the area is a vital complex of work and residence, sales and consumption, but its industry and commerce are molded on some preindustrial pattern of small scale, low mechaniza-
tion, product but not division-of-labor specialization, frequent turnover but tiny inventories, personal rather than contracted negotiations. It is difficult to suppress the persistent, whispered thought, "Here is an anachro-
nism." One suspects that, for all the virility of the area, it is living on borrowed time. The insidious fact that the municipality of Cairo has recently enacted an "architectural control ordinance" designed to conserve and restore the historic character of the area suggests that artificial means may be required to prevent the borrowed time from running out.

In 1947 slightly under 400,000 persons inhabited Community X. By 1956 this population had risen slightly to 475,000. While such an increase is not insubstantial, especially considering the saturated level of physical de-
velopment, it should be noted that of all the suburbs in Cairo this one grew least, proportionately. In a metropolis that adds some 4 to 5 percent annually, both from migration and natural increase, to grow at so slow a rate is tantamount to decline. In 1947 almost one in five Cairenes lived in this city of the past; by 1956 it was only one in seven, and the proportion continues to grow smaller.

The Factor I scores of the fifty census tracts in Community X reflect the cross-product of poverty and urban-
ism. In 1947, the average Factor I score was 0.36; 13 some thirteen years later it was an almost identical 0.37, indicating that the relative position of the zone had not changed in the interim, despite its improvements in literacy and prosperity. Factor II scores, indicating the presence of many single males, were highest in the tracts that straddle the semi-modern business incursion along Sharia' al-Azhar and in the Azhar University quarters favored by students. Typically, the tracts in this community also had high scores on Factor III (indicating social disorganization) which identifies this zone as selectively attractive to the handicapped, the socially stigmatized, and those with no or illegitimate professions. Commerce, industry, and services dominate the em-
ployment picture, but the future is bleak for the trades that have hitherto sustained the district. As recently as 1917 the zone still contained the heaviest concentration of industrial workers; however, since the competitive growth of modern industry and its final surge to domi-
nance within the past few decades, this is no longer true. The older craftsmen may continue to live and work in al-Jama'iyah and al-Darb al-Abbass, but the new gener-
ation knows that the jobs of the future lie in the modern factories. And as the encroachment of this business zone, drawn to it even now from other parts of the city, becomes more modern in its tastes and more secure in its finances, this economic avenue will also dry. The zone has shown a remarkable capacity for survival and a thousand years of history have not defeated its; possibly it will find some new support and survive yet a little while longer.

Community IX—The Funeral Quarters of the Eastern Fringe

If there is any section of Cairo that bears resemblance to the famous bidwirrallah or shack towns surrounding North African cities or the squatters' favelas that ring South American centers, it is the cemetery cities that stretch in clustered concentrations along the eastern edge of the metropolis, all the way from Burj al-Zafar on the north to the tip of al-Khaffah on the south. But whatever parallels the reader may attempt to construct in order to visualize this unique zone will be incorrect. Neither the image of a European-American cemetery (or even one in Turkey or the Fertile Crescent) nor of a bidwirrallah will set one on the right track. There is literally no precedent —at least for its appearance and multiple functions,

13 In averaging the scores for 1947, N=49, since two tracts with high deviant scores on Factor I were omitted. These con-
stituted the heart of the ancient Jewish ghettos of Cairo. The exodus of a large majority of Cairo's Jews began to occur in 1956 and was virtually complete by 1960. By that year, the two tracts had Factor I scores close to the average level of Community X and could be included in computing that average. Thus, in 1956, N=50.

110-111. Aerial views of the tomb cities of Community IX

though these may be many legitimate precedents for its inhabitants and their problems. It is perhaps best, then, to empty one's mind totally and take a tour through the streets and perhaps a detour into history.

From the air the funeral fringe demonstrates a fa-
miliar rectangular and regular street plan with what appears to be an orderly procession of detached but roofless bungalows, a travesty on suburbia. Its openness
in, he enters the parody of an ordinary house—two adjoining rooms, dust-carpeted, in each an oblong shape of stone or plaster. Under one floor lie the male members of the family; segregated in death in the adjoining cellar are the women.18

Remarkable as this description is, it misses the most surrealistic element of the scene, namely, that within this linear necropolis live perhaps 100,000 contemporary residents, not as bones in the cellar but as full-blooded if marginal inhabitants of a great living metropolis. Within this vast dusty quarter, wedged between the windmill hills that insulate it from the live city and the barren rockiness of the Maqāṭūn chain of hills separating it from the eastern desert proper, unserved by municipal utilities, dependent upon a scattering of communal water taps, totally devoid of plumbing and sewers, largely unconnected, except illegally, to the electricity network, is a large resident population, some legitimately inhabiting the tomb-houses for which they bear custodial responsibility, others squatting in less-acknowledged state within other tomb buildings, still others inhabiting a multitude of jerry-built rural structures, some of which are taking on an air of substantial permanence. Here and there are commercial nodes—a small grocery stall, a barber, perhaps even an open-air “café”—all designed to mitigate the hard task of adapting a city of the dead to the needs of the living.

This linear city breaks down, in reality, into a number of suburbs which constitute the functional areas of a residential neighborhood. The northernmost concentration lies due east of the medieval core city and is most often referred to as the Qayt Bay cemetery, after the Mamluk Sultan whose tomb-mosque is located there, together with those of Barqûq, Inâk, and others who followed al-Nâṣir Faraj, the first to build in this zone. Further south, approaching the sharp rise at the Citadel which divides the eastern from the southern cemeteries, is the suburb known as the Illa al-‘Umm al-Maqâṭūn necropolis, deriving its name from a gate to Salih al-Din’s wall extension, formerly there. Beyond the Citadel, entered through the ghost portals of yet another of Salih al-Din’s additions (the Illa al-Qarqûsh or the Gate to the Tombs), is the so-called Great Qarqûsh or the Tombs of the Caliphs (from which the quarter’s name, al-Khalifah, is derived) which stretches southwest in a long lobe some two kilometers long and one kilometer wide, its outer limits described by the loop of a railroad line. The heart of this largest of all cemetery zones is the almost urban quarter around the shrine-mosque of Ḥāfir ibn ‘Abd al-Rahmān, to which Muslim pilgrims have been drawn for well over a thousand years. South of this dense concentration both

Densely settled urban quarter near the Imami Shâli's obelisk today

The contemporary metropolis

the tombs and the residents are distributed more sparsely. Who lives in these necropolises and why? I must confess ignorance, for to fathom the motives and adjustments of their residents would require a field study to supplement the statistical analysis. Some inferences, however, can be drawn even from the sparse statistics. First, it is possible to establish the general fact that until fairly recently, the resident population of this enormous quarter was quite small and had fairly legitimate reasons for being there. In the Middle Ages, here were the zwâiyâlks which offered hotel accommodations to pilgrims and pâ'ís and, even then, the role of tomb custodians was not so well developed. Whole families might repair to the cemetery for a day or week to visit the graves of their ancestors. On sacred holidays the cemeteries took on the air of a convivial community picnic, with vendors hawking edible and sweet treats, children playing in the open spaces, their elders sociable and probably noisy. While the resident mystics have long since disappeared, the tomb custodians remain and have grown more numerous. Their ranks were supplemented in the early twentieth century by men employed in the lime kilns (in the northern portion) and the limestone quarries (in the south). Only a slight and gradual increase could be noted during the few decades following 1917, suggesting that the dynamics of the zone's settlement and its functions did not alter radically.

However, by 1945 the population had mounted to over 50,000, indicating that the overcrowding and housing shortage induced during the war years had forced some Cairo to seek new quarters to the city. In the peripheral zone, even if their employment did not require location there. Mining and quarrying still accounted for the largest proportion of employed males in each and every tract in the district, with services (presumably custodial care of the tombs) also important in the larger cemeteries; but employment was far more diversified than before and could not be adequately accounted for by the limited opportunities in the local vicinity. Men were engaged in transportation, in trade, in construction, and even in personal services. The evidence points inescapably to the arrival of squatters uninvolved in the traditional economic base of the immediate district. Complete rural villages were constructed on open sites. As recently as 1959 such a squatters' village could be seen in situ just beyond the Mosque of al-Azhar at the edge of the Qalyûb Cemetery, although their mud huts were later forcibly removed by the government to make room for the major Qalyûb-Slima Highway that now traverses what had been a totally rural setting. By 1960, with population up to 80,000-90,000, specialization of the labor force had virtually disappeared. No longer could the presence of local resources (tombs and quarries) account for the employment of more than an insignificant minority of the breadwinners. The zone had become just another place to live, "selected" only by those who had no alternative. This change can be seen quite clearly in the relative decline of all census tracts in this section on Factor B between 1947 and 1960. The average Factor 1 score of tracts in Community IX during the earlier year had been -0.76, indicating a low status but not necessarily a rural-type population. On the contrary, there is reason to believe that this zone, unlike the other fringe areas, contained a population largely adjusted to urban life and quasi-industrial employment. But by 1960 this score had dropped drastically to -1.25 (or one and a half standard deviations below the city's average), placing the cemetery zone on a par with the remaining rural fringe areas. It can be surmised, then, that the newer arrivals who swelled the resident population of the funerary city between 1947 and 1950 were quite different from the original inhabitants. They must have been predominantly illiterate, poorer, and probably has well integrated into the urban economy; in addition, they had the family patterns of early marriage and high fecundity that betrayed their cultural affinity with rural Egypt, from which perhaps a great many had recently come.

The future of this city is moot. Cairo's planners eye the district covetously but in secret, for here is a logical direction into which the cramped city might expand, if

10 While the census does not provide information on the "type" of transportation, observation offers a hint. Nonmodern transportation in Cairo still depends upon the donkey or multi-drawn cart. Only in the fringe areas can these animals be safely tethered at home for protection. The cemetery fringe areas, due to their proximity to the demands of "nonmodern transport," namely the shops and industries in the medieval business districts, have therefore proven equally attractive to persons in this occupation. only the tombs could be removed! But the sheer size of the zone and the permanence of many of the tomb structures, as well as their high artistic merit, defy simple clearance, even if the revulsion against the dead could be overcome. On the other hand, there is the problem of the already-established residents, as well as the new ones who have been added since the 1957 war, who live under conditions that cry for improved urban services. But if urban utilities are extended into the district to alleviate some of the real hardships, this cannot help but encourage further residential development, a prospect with dubious health consequences. To outlaw further settlement is extremely difficult, for so long as the metropolis remains severely overcrowded in its poorer districts, it is inevitable that some of her citizens will prefer the air and openness of the cities of the dead to the oppressive crush in the cities of the living.

Community I—The-baladi slum of Bûliaq

Bounded on the south by the major traffic artery that still insulates the former island from its physical but not social neighbor, the bocooq "Gold Coast," truncated sharply on the west by the Nile that prevents contact with the plush island of Zamâlik offshore, and attenuating northward along the coast of the Shîli, still a sometime riverport for small sailing vessels, is another urban slum of contemporary Cairo, Bûliaq. Although lacking the venerable patina of the medieval city, Bûliaq is nevertheless more comparable, in quality if not in age, to the old city whose port the originally was than to the rural or cemetery slums at the city's edge. Physically, her buildings are far superior to village-type constructions, for they are mostly made of cement and concrete rather than sun-dried mudbrick, and the zone contains a wide variety of industrial as well as commercial installations. Socially, too, poverty of the extreme type found in Egyptian villages or in Cairo zones of true marginal subsistence only tenuously connected with the urban economy is not marked here. Nevertheless, the qualities that undeniable make Bûliaq an urban slum are those that define such districts elsewhere, albeit according to different sets of standards.

The urban character of Bûliaq's slum state is seen most clearly in its density, for here, despite the generally unimpressive height of the buildings (two to four stories for the most part), are crammed one-tenth of the entire population of the city. In 1945, the 23 census tracts comprising this subcommunity contained over 265,000 persons, a figure that had increased to in excess of 350,000 by 1950. Since the total area of the district amounts to only 4.5 square kilometers, the overall density was almost 60,000 per square kilometer in 1945 and an astronomical 77,000 persons per square kilometer in 1950. (This is about four to five times higher than the density of big-city slums in the U.S.). While this is the overall density, when one takes into account that a large portion of Bûliaq's land is for industrial, transport, or wholesale use,
in this area, it is to be expected that Bulaq should suffer from extreme room-overcrowding. Indeed, here is a quarter in which whole families of twelve or even more members may sometimes be compressed into a single room; and here is a quarter in which the people, of necessity, must overflow onto the streets to carry out in public many of the functions that are generally confined in a Western city to the privacy of the dwelling unit.

Along the main artery of the quarter, the wide street of Shari‘i Sitta-bin-Isharin Yuliyah, which is used by the buses, streetcars, and automobiles, must traverse the district in order to link the main Westernized shopping center of Asbakhyah with the island of Zamalek and the eastern shore of AlJizzah, this overflow often obstructs traffic. There is a constant eb and flow of children—both raggedurch and neat, trucic-clad school children of women, almost uniformly in traditional black gown and veil but now often wearing more Western-style houseresses under their outer robes, carrying on head, shoulder, or hip a varied assemblage of burdens ranging from laundry to edibles to infants; and of men, showing signs of increased urbanization—some still attired in the traditional garb of kong, full jalabiyah and skullcap or turban but others in the white shir and wrinkled trousers of the januji (the foreigner). They gather in clots to gossip; they gather in the fly-specked coffee shops (for men only) that dot the area to while away the steaming hours over a small glass of too sweet and almost black tea, a newspaper (if they can read), or a slow game of backgammon; they gather to quarrel, with vigorous gestures and loud inscriptions but rarely with physical force (at least among equals), or merely to watch the outcome of another’s quarrels; they gather to haggle over a small purchase from a pushcart or to watch others. One senses that all these gatherings are fostered not so much by the entertainment nature as by the sheer pressures of people on space, making crowds even where crowds are not sought.

Off the main thoroughfare, in the tiny streets that take a labyrinthine and unpaved course to give access to the stores, dwellings, and tiny industrial shops that are freely intermixed in the quarter, the mass of humanity may thin out some. But it is here that the old men, circling with the sun in winter and the shade in summer in a slow progresion of seats, the barefoot children, and the occasional tethered (or free-roaming) sheep or goat, are sufficient to remind one that, although they now live in an urban slum, many of Bulaq’s residents have come from rural villages and have only recently begun the process of adapting to city ways. The major rural influx into the quarter dates from the years of World War II, and in 1947 the characteristics of the residents still reflected quite vividly the recent arrival of many of them. Since 1947, however, the process of cultural assimilation to urban ways has had a chance to blend in some of the more extreme rural types and, statistically speaking, to raise the relative socio-economic score of the district to within the urban range.

In 1947, the average score on Factor 1 of the 23 census tracts comprising the subcity of Bulaq was 70, considerably below the theoretical “norm” for the city as a whole. By 1960 this score, while still in the lower portion of the distribution, had improved to 80. What do these scores tell us about the kinds of people living in Bulaq?

For one thing, they tell us that a large proportion of the men and an even more substantial proportion of the women are illiterate. Their children, numerous indeed as indicated by the relatively high fertility ratios in the quarter, are likely to be somewhat better prepared for participation in the modern sector of the economy than are their parents, for many of them are enrolled in school and will complete at least the primary stage (six years), unless the loss of their parents or a complete catastrophe forces them onto the streets and into the array of unskilled boys prematurely “in the labor force.” The girls are less likely than their brothers to be able to take advantage of the free public schools, for they are frequently needed at home to care for younger siblings and to relieve an overburdened mother. Some are encouraged as domestic servants in the households of the middle- and upper-class residents in the adjacent districts, where their youth limits their usefulness but where their jobs at least provide better food and lodgings than can be offered in their own homes. Their small wages are frequently paid directly to their families and some may be set aside to provide the girl with her basic dowry of bed quilts, cooking pots, and a personal wardrobe. Youthful marriage is typical in this area, the predilection to long years of almost constant pregnancy and childbirth, unless the alternate fate of divorce, unfortunately not uncommon in this district, befalls her.

Occasionally the residents of Bulaq do not rise above the semi-skilled level and most remain in the unskilled, brute force occupations. Men work in domestic service as cooks and waiters; work, often under Italian or Greek supervisors, in the small machine shops and automobile repair garages that are concentrated in the southern triangle of the zone; work as janitors in government or private office buildings, or in jobs associated with the wholesale warehouses, open storage yards, and transportation terminals also concentrated in the district. Local commercial establishments offering services to a local clientele probably also provide employment for some men in the quarter. Even so, there are many more people than there are jobs, and the district harbors a fairly substantial number of unemployed and “nominally employed” men, easily rounded up for emergency work on the Nile embankments when the river threatens to rise above normal, or for participation in a political demonstration when the government wishes to assemble an impressively large crowd to hail a visiting African statesman or to march on the embassy of an unfriendly power.

The district is almost exclusively Muslim in its religious persuasion, with the exception of one tiny enclave at an old Italian Catholic school (census tract No. 126 on the key, in 1960 no longer significantly different from its neighbors as it had been in 1947), and the southernmost tip to which automobile repair shops, with their déclassé Italian and Greek mechanics, had gravitated. Few Egyptian Copts, even of lowest socio-economic status, have found this zone congenial, and its public edifices are almost exclusively mosques, including the shrine-mosque of Abai‘ al-Ali‘ and the multi-tiered Turkish-style mosque of Sani‘ Pasha (late fifteenth and sixteenth centuries respectively). Almost nothing remains of later public uses, for the port has long since disappeared and even the Museum of Antiquities, originally located in Bulaq, has been twice removed to its present site near the Hilton Hotel in the “Gold Coast.” A few of Muhammad Ali’s industrial establishments still retain their original locations in Bulaq (most notably the Government Printing Office) although the plants have been renovated. Bulaq is a slum because it is an old area, but it retains little of historic interest or antiquarian charm.
Similar to the other major slums of the city, this zone, known as the "Old Cairo," owes its low state in part to its age, even though few of the buildings can trace a specific lineage in distant history. Only a tiny belt at the edge of the kharab covering Fustat is old, including the walled enclave of churches and Copts, synagogues and, formerly, Jews that make up the present complex at Babylon, and the Mosque of Amr, which retains the site it not the architecture of the first mosque to be built in Africa after the Arab invasion. The remainder of the district, between this eastern limit and the river's bank, was constructed on land that had been added centuries after the founding of Fustat. Nevertheless, later growth could not shake off the stigma of birth and tended to take on the character of existing uses. In 1800 this community was a separate "suburb" containing only 13,000 residents, many of whom were Egyptian Christians and Jews. A number of the more noxious industries of the metropolis were segregated there and, indeed, still are, including the abattoirs and the pottery kilns, although the latter no longer produce the lustre glass for which Fustat was justly renowned. As urban expansion eventually engulfed the original nucleus and made it contiguous with the developments to its north, the district added population— but failed to better its degraded status.

The eight census districts that comprise this southern-situated slum contained a little more than 100,000 in-habits in 1947, a number which had increased to 188,000 by 1960. Between the two census dates there occurred not only a marginal addition of population but also a replacement, with the departing Jewish community and foreign religious personnel more than compensated for by newcomers from lower educational and social levels. Excluding the tract that, due to its religious personnel, ranked far above the norm for the district in 1947, the average Factor I score for the seven remaining tracts was 0.25 placing the district on a par with the other two slum zones. After population replacement and new growth, however, the average of all eight tracts (for the one deviant had found its level) in 1960 had dropped to 0.14, making it by that year the most depressed of the three urban slum districts.

The many Cairo houses that believe Misr al-Qadimah is still largely Coptic are carrying over from the past history of the district an anachronistic impression of its present character. Actually, only 8 percent of the popula- tion in 1947 was non-Muslim and this had dropped to 6 percent by 1960. Nevertheless, it is true that if there are Copts in the city who have failed to become absorbed into the educational and occupational modernization of Cairo, they are to be found concentrated in this zone from which the more upward mobile have departed. They can often be identified by their proud "badge" of community, elaborate blue Byzantine crosses tattooed on the back of their hand or wrist.

The district differs from the two other slums in yet another way. Poverty in the zone is of a type closer to the rural than the urban mode, despite the generally high density of development. To some extent this results from the district's location on the fringe of the kharab, since squatters have freely encroached into that desolate quart- er, building their primitive mud huts on the mounds. To some extent it also results from the fact that the district blends into the true rural fringe to the south where agriculturalists predominate. The rural and quasi-rural population, however, is in the minority, and most residents are old-time urbanites who occupy dwellings that are of urban design, albeit of marginal quality.

Community XIII—The Southern Rural Fringe

Misr al-Qadimah fades off imperceptibly on the south into a rich fluvial bed ideal for agriculture which, where it indents from the river almost to the edge of the Migmat, at the ancient village of Basset, occupies land once submerged under the Birkat al-Elabash (The Abyssinian Pond). The remainder of the zone hugs the river in a narrow strip that extends all the way to the industrial satellite of Hilwán. My statistical analysis has had to exclude the only nonrural settlement along the route and, indeed, the only true "suburb" Cairo has, namely the town of Ma'adi, conceived by Britain's colonial architects and, during the British heyday, an exclusive residential enclave. Ignoring this anomaly, however, the remainder of Ma'adi is now an upper-middle-class Egyptian community of private homes set amidst a dild urban subdivision reminiscent of Geddes-Howard gone berserk. It was, unfortunately, one of the two census tracts that had to be eliminated from my statistical analysis because its boundaries and data could not be made comparable for the two census dates.
of the zone is chiefly rural. It is these portions that I have delineated as Community XIII.

As late as 1947 this zone of almost pure rural character had been bypassed in the process of urban expansion to the southernmost node of industrialism growing up at Halwān. This can not long remain the case, however, for fingers of industrial development already stretch up from Halwān, and cement factories, thermo-electric plants, and workers' compounds now abut alluvial fields still cultivated by ṣulāḥiyāt (water wheels). Nevertheless, between 1947 and 1950 one would be hard pressed to discover any great evidence of the transformation or urbanization of the district. On the contrary, the average Factor I score of census tracts in this rural residual actually declined from —1.85 in the earlier year to —1.84 in the later year, placing the district below all other fringe areas.

On the other hand, direct petroconversion with farming and quarrying, formerly the dominant economic activities in these tracts, has tended to decrease markedly since 1947, indicating that, although life styles have altered little in the direction of either skill-improvement through literacy or increased equality between the sexes, the men at least are being drawn into urban service and industrial employment, albeit slowly and at the lowest paid and least skilled levels. This is a movement which cannot be reversed, however, and it is expected that they eventually will drift into the wind of change.

What influences are not introduced by this exposure will undoubtedly force their way into the zone by more direct means, namely, by the location of industrial plants there. The tracts bordering the railway and the newly improved highway that link Cairo with Halwān are bound to become increasingly attractive to industrial uses which are already making their appearance. As this trend continues, one can expect a further influx of industrial workers, on the one hand, and the absorption of the resident labor force into the modern economy, on the other hand. When this happens, the Factor I scores of census tracts here will undoubtedly begin to rise to within the urban range. Other rural fringe areas may have their frontiers pushed back farther, but the southern fringe will probably become extinct.

THE QUARTERS OF THE WESTERN CITY

Virtually encircled on three sides by the ring of interior slums formed by the oldest quarters of al-Qahirah, Būlāq, and Mīrāl al-Qudnūmah, the city which grew up in the early modern era as a counterpoint to medievalism could expand in only one direction—the west, toward, then into, then beyond the Nile. Each successive thrust left a vertical striation in the social mosaic of Cairo. Closest to the medieval edge both physically and socially is Com-

munity XI, the transitional belt; then comes the Gold Coast, heart and façade of modern Cairo, denoted on Map XVII as Community VIII; beyond it lies the Silver Coast of Community VII, while still farther to the west remains an area just now being converted from rural to urban uses, the fringe area of Community VI. These four communities make up the Western City and are integrally and functionally linked in their development. The epitome of this city is the Gold Coast, therefore, although it postdates the transitional belt in time of settlement, it deserves our attention first.

Community VII—The Gold Coast

In the space of less than 5.5 square kilometers of the most valuable land right in or adjacent to the center of the city is concentrated a significant proportion of Cairo's wealthiest and most Westernized residents. Once the rather exclusive domain of the "colonial" foreigner and the francophile Egyptian elite, this zone has obviously undergone a dramatic transformation since the Revolution of 1952 and the foreign exodus of 1956. But despite these changes, it still ranks considerably above all other parts of the city and is both the subcity of Cairo most visible to foreigners and the district most frequently pictured on postcards and brochures designed to display Cairo's luxurious façade. Along the broad and fabled river, metallic green-blue under the winter sun, turbulently headlong through the summer swell that renews a flood season now scientifically controlled and modulated, rise the gleaming white piers of sleek apartment buildings and new hotels. Set amid lush tropical trees, the buildings are planted heavily into blocks with irregular triangularly defined by wide, paved, swept, and sidewalk streets. Taxis cruise the Corinches, the broad thoroughfare bordering the Nile (the revolutionary regime's first contribution to Cairo yet), bustling, well-dressed clients—domestic or from abroad—heading for the department stores and specialty shops "downstairs," the plush cinema palaces, the Victorian ice cream parlors of Gropi, the Sporting Club or the races on the Jazārāh, or the "little" dressmakers and redolent, unbelievably numerous beauty salons upon which depends the superb grooming of Cairo's largest leisure class—the upper and upper-middle-class matrons and their unemployable daughters being prized for marriage. Naughts, masquerading in blue or white uniforms, amble along in their backless slippers (the Achiles' heel that betrays proletarian origin), shepherding plump children in starched playclothes, perhaps as their grandmothers once minded the sheep and goats that still make an unexpected and incongruous appearance in the zone. Little boys dart hazardously out of the steamy tiny laundries that dot the area, balancing piles of freshly ironed sheets and linens on one palm, carrying in the other hand hangers (on loan only) on which are hung Paris-styled dresses that would scandalize their mothers and sisters at home. Cooks and servants (waiters) sally forth resolutely, ṣulāḥiyāt balancing behind them, to replenish their inevitable woven baskets with food supplies from the markets. Idle bawāshīn (docekeepers), resting from their daily chore of mopping hallways and lobbies, sit in the old men of Būlāq in their routine of shifting seats, but their finer garments and their occasional acts of rising to bow to an entering resident or to relieve one of a stray package distinguish them as "useful" members of the working force, in contrast to the dependents in Būlāq. Once, this subcity was a world unto itself—but that world is quickly passing.

The population of this zone is numerically less impressive than its influence, but its wealth has hitherto been sufficient to support a host of public and private facilities designed to insulate it quite effectively from the other social worlds of Cairo, of which many of its residents remain dismally ignorant. Some 65,000 privileged persons lived in the district in 1947. Since that time, the population has shifted somewhat, decreasing in the commercial quarters and expanding in the riverfront strips of high-rise construction. By 1950 the district contained a population of over 89,000 but appeared finally to be reaching a saturation point that could be expanded only by building even higher. Many of the early villas had already been supplanted by apartment buildings, and those few remaining ones not being used as embassies and consulates...
showed the signs of neglect that presage a land use conversion.

No Cairo resident uses the term "Gold Coast" to describe this quarter. However, ordinary Cairenes carry within themselves a stereotype and an ambivalence toward the sections known as Azbakiyah, Selaymán Pasha, Qar al-Dallmah, Gareîn City, Qar al-Nil, and Zamâlîk that is unequivocally quite close to how Chicagians of all classes view their North Shore Gold Coast. But unlike Chicago, where the slum symbolized the ethnic alien counterpointed against the white Protestant native aristocracy of the Gold Coast, in Cairo the Gold Coast is the "alien body" to which the native city has played exploited host (and reluctant beneficiary as well, for this is the quarter which employs a large minority in service capacities).

In its insular days as a "colonial" city, about the turn of the century, the district was largely inhabited by foreigners and Christians, particularly in its most heavily developed commercial core at the Azbakiyah. Its slow expansion along the Nile shore and across the bridges onto the Jazirah took place without disturbing either the dominant or the taste-setting role of the alien elements, although at least demographically this concentration was inevitably diluted as the district expanded and attracted followers of the twin and extrinsic magnets of royalty and colonial agents. By about 1937, Egyptian Muslims accounted for less than half of the population of the district, despite their presence in large numbers as a resident service population. By 1947, Muslim Egyptians constituted over 57 percent of the population but, of those who were in the district not as domestic servants but as fellow residents, many spoke French among themselves and patterned their values and way of life as closely as they could on their perhaps distorted image of a sophisticated and even puritanic West.

With the Revolution and then the aftermath of the Suez Crisis (1956), however, the district underwent a rapid population succession. In 1957 a high vacancy rate, brought about by the significant numbers of foreign nationals, permitted the influx of many upwardly-mobile technocrats of the new regime, although some still shied away from the zone because of earlier antagonisms, preferring the more familiar quarters of Helopoli and the Silver Coast. As a result, the ethnic composition of the Gold Coast's population altered radically in the direction of indigenization. By 1960, Egyptian Muslims constituted almost three-fourths of the population of Community VII, reflecting a new unification between elite and mass and a final extinction of the more glaring aspects of alienism in the city. Arabic soon supplanted French on the streets and in the stores; even the once exclusive Jazirah Sporting Club (island companion to the Turf Club that had been hosted by English in the street uprisings in 1913 along with the old Shepheard's Hotel), the ultimate foreign citadel, bowed to its inevitable future as a recreational facility for Egyptians.

The alterations within the residential sections were paralleled by a similar metamorphosis in the "Westernized" central business district that included the census tracts of al-Tawfiqiyah, al-Azbakiyah, and its southern extension to Bâb al-Lûq (the notorious home of thieves and escaped prisoners in medieval times). In the shops, as a reflection of the changed nature of the clientele and often a changed ownership as well (some of the major ones acquired by the government had been owned by prominent French-Jewish families), the alien goods, patterns, and prices that had discouraged the nonaristocracy from venturing into the shops gradually were removed and in their place were substituted items and actions designed to attract a less exclusive but also more typical class of buyers. Black-gowned or -coated women from the Eastern and Northern cities dared to windowshop along Shâfî Selaymán Pasha, and aspiring girls and boys from lower-middle-class zones tried on new clothes in

136. Shâfî Qar al-Nil's shops sterilized for siesta
former august settings or tried on new personalities in the somewhat less well-tended premises of sequestered Gragg's. Recreational facilities also underwent a similar change, with movie houses that had formerly specialized in foreign films being converted to Arabic productions or to an expanding number of stages for the legitimate Arabic theater. Even the Opera House, last stronghold of Europe, billed fewer and fewer operatic and symphonic performances, more folk ballets and popular singers. The leisureed and/or moneyed class had become both smaller and more broadly based in the new society.

Despite these radical changes, the relative position of the Gold Coast within the urban status pattern was sustained. In 1957, census tracts in this subcity had an average score on Factor I of +2.28, by far the highest of all subcommunities in Cairo. Even after the disappearance of the long upper tail of the distribution (which had been associated with European residents), the average in 1960 was still close to two standard deviations above the "norm" for the city, being +1.77 in that year, and was still substantially above the average for the second rank subcity of Helopoli.

This high score, reflecting almost universal literacy, high rates of school attendance, delayed marriages, and smaller families, expansive living quarters, and the host of related characteristics that help to define the degree to which residents of this zone are oriented toward the modern rather than the traditional patterns of evolving Egyptian life, can no longer be attributed merely to the presence of a polyglot foreign community. Statistically, this latter community has become both less significant numerically and more diversified socially (for it now includes embryonic personnel of a variety of African and Asian powers as well as Europeans). In terms of its influence it no longer constitutes a closed social body dictating the terms of admission to aspiring Egyptians; rather, foreigners now adjust to or simply soak up the dominant community of upper- and upper-middle-class Egyptians who chiefly command this subcity.

137. Apartments replace grazing land on the ancient island of Rawdah in the Silver Coast

Community VIII—A Parallel "Silver Coast"

If the Gold Coast preempts the central part of the east bank together with the island of the Jazirah, a lesser metal, perhaps silver, occupies the western bank and the southern island of Rawdah. Of later origin, reflecting the tardy appearance and uncertain growth of a mediating middle-class in Cairo, it has been growing in the quarters of Ajlûd, Dâqiq, Jayl (not the separate town but the zone near Cairo University and the Zoological Gardens), and Rawdah in a manner that parallels the other middle-class zone at Helopoli (Community IV in the Northern City), namely, through land reclamation. However, while the northeastern middle-class city was carved out of the desert's border, this southwestern counterpart has gradually been encroaching upon the urban region's fertile green hinterland in its fight for lebenraum.

As recently as the late 1940's, the island of Rawdah and the entire area on the west bank of the Nile, despite the existence of bridges crossing the waterway and the tramar service that had been extended as far as the pyramids, was still being used primarily for agriculture. In this zone were some of Cairo's most prosperous and productive fazâ (pl. for 'zaâb, a large, single-ownership "lot" including villagers who supplied the labor for generally absent owners), some held by members of the royal family, some important "pashas," others in wâqî'...
addition, there were a few recreational and institutional uses, generally occupying old palaces, including an Agricultural College, the faculties of Law and Engineering of the newly relocated Cairo University, a Shooting Club, the Zoological, etc.

Particularly since the 1950's, large sections of this former bucolic expanse have been converted to urban quarters capable of absorbing a growing proportion of Cairo's overflow population. Even Rawdah, site of the ancient Nilometer, which had remained incongruously rural until very recently, has been the center of one of Cairo's most active building booms. The old villages are being displaced by dense arrays of elevator apartment houses; the flocks of black goats and grey sheep are disappearing. In place of corn crops, pile drivers are planting new steel foundations. Today, there are still sharp contrasts where the new has not yet totally supplanted the old, but one can safely predict that it will become increasingly difficult to locate such anomalies as the area completes its transformation.

In 1947, despite its vast area, there were fewer than 55,000 residents in the area delineated as Community VIII, including the student population around the Jizah campus of Cairo University. Represented were such diverse elements as the fishermen squatters on the nwegh-encumbered land at al-Hûlîyah, the scattered agriculturalists awaiting displacement, the urban aristocratic residents of the narrow riverfront at Jizâh—whose expectations that the west bank also would become a Gold Coast had been fulfilled—and a large mass of lower-middle and middle-class Egyptians attracted to the zone by its combination of location convenience and moderate rents.

Some scant thirteen years later this population had quadrupled, reaching 225,000 according to the Census of 1960. Of all thirteen sub-divisions of Cairo, then, Community VIII experienced the highest rate of demographic growth—most of it coming from an influx of Cairenes from across the river. The invading population resembled the middle-class Egyptians already in the district much more than they resembled either the defunct aristocracy (whose confiscated 'izâb provided the building sites for many of the new developments) or the displaced villagers. Favoring the upper-middle-class newcomers were the often elegant apartment houses close to the Nile at 'Ajjâzah and near the Zoological Gardens in Jizâh; the remainder were content with the less commodious dwellings that lined and radiated out from the major highway to the pyramids.

The Factor I scores of census tracts in the community between 1947 and 1960 have been upgraded, reflecting the rapid conversion from semi-rural to urban and from poor to moderate and good residential uses. The average score on Factor I of the census tracts in Community VIII in 1947 was +0.68, which placed it considerably below the more established middle-class zone around Heliopolis, and put it roughly on a par with Shubra from which it differed primarily in terms of ethnic composition rather than social prestige. Whereas Shubra's distinguishing characteristic was its selective attractiveness to Egyptian Copts and the settlements on Rawdah and the west bank were almost exclusively Muslim.

Community VIII maintained this characteristic feature through the post-1947 growth period. Even in 1950, when the average Factor I score of the tracts in the zone had increased to +1.15, some 59 percent of its residents were Egyptian Muslims. The zone, then, is best described as an emergent urban district catering to an emergent and native middle-class. Its future, bright indeed, will follow theirs, if the zone does not lose favor due to the relocation of the government offices from their present concentration at the southern edge of the Gold Coast to the new quarters in Nasr City. However, other professional concentrations in the south, such as the University and the medical complex at Qasr al-'Ayni and Mansyûl, as well as the commercial center on the east bank, should help to sustain the locational advantages of the Silver Coast, even after the government offices have departed. In addition, since this area, together with the Gold Coast, has been the recipient of several new hotels for visitors to Cairo, it should begin to diversify its commercial services to take advantage of this potential source of prosperity. The prognosis is for Community VIII to continue its expansion into the residual fringe on the west, Community VI.13

Community VI—Imbîbah and the Western Rural Fringe

The expansion of the Silver Coast back from the river's edge into the fertile flood plain between it and the desert's limit cut deeply into a formerly large rural fringe. This zone of fluid and contracting boundaries has no future at all. By the time of the next census, only a tiny rural portion will be left within the arc-shaped zone delimited on the north and west by the curving course of the major railroad to Upper Egypt and the irrigation canal that parallels it.

Because of its fluid condition one cannot locate a clear boundary for Community VI nor can one easily characterize the population. Two rather different types of popu-

13 I made a trip to Cairo during the summer of 1968, by which time this prediction had become a reality. Virtually nothing remained of the northern portion of the agricultural fringe save for many of the older agricultural settlements. Only portions of Mit 'Ughâb persisted, encroached by new apartment houses and villas.
the rapid conversion from semi-rural to urban and from poor to moderate and good residential uses. The average score on Factor I of the census tracts in Community VIII in 1957 was +0.68, which placed it considerably below the more established middle-class zone around Heliopolis, and put it roughly on a par with Shubra from which it differed primarily in terms of ethnic composition rather than social prestige. Whereas Shubra's distinguishing characteristic was its selective attractiveness to Egyptian Copts, the settlements on Rawdah and the west bank were almost exclusively Muslim.

Community VIII maintained this characteristic feature through the post-1947 growth period. Even in 1960, when the average Factor I score of the tracts in the zone had increased to +4.19, some 95 percent of its residents were Egyptian Muslims. The zone, then, is best described as an emergent urban district catering to an emergent and native middle-class. Its future, bright indeed, will follow theirs, if the zone does not lose favor due to the relocation of the government offices from their present concentration at the southern edge of the Gold Coast to the new quarters in Nasr City. However, other professional concentrations in the south, such as the University and the medical complex at Qasr al-Ayyan and Muyal, as well as the commercial center on the east bank, should help to sustain the locational advantages of the Silver Coast, even after the government offices have departed. In addition, since this area, together with the Gold Coast, has been the recipient of several new hotels for visitors to Cairo, it should begin to diversify its commercial services to take advantage of this potential source of prosperity. The prognosis is for Community VIII to continue its expansion into the residual rural fringe on the west, Community VI.14

Community VI—Imbabi and the Western Rural Fringe

The expansion of the Silver Coast back from the river's edge into the fertile flood plain between it and the desert's limit cut deeply into a formerly large rural fringe. This zone of fluid and contracting boundaries has no future at all. By the time of the next census, only a tiny rural portion will be left within the arc-shaped zone delimited on the north and west by the curving course of the major railroad to Upper Egypt and the irrigation canal that parallels it.

Because of its fluid condition one cannot locate a clear boundary for Community VI nor can one easily characterize the population. Two rather different types of populations reside in the zone but, although they differ in the degree of their involvement with the urban economy, they do not feel as profound a gulf between them as the one which separates them both from the middle-class urbanites who have recently invaded. One subgroup of the population, concentrated largely to the north in the settlements around Imbabi, is urbanizing quite rapidly, but urbanizing on a pattern closer to the Bildaq prototype than to the Silver and Gold Coasts that are its closer neighbors. Several nucleus villages in this subsection had long served as entrepôts for the production of the western bank on its way to the city. Thus, many of the residents were occupied not in farming per se but in the associated activities of transport and marketing. However, as large industrial plants were located to the north of the bounding railroad, an urban proletariat was added to the nuclei populations. In addition, a public housing project built by the Ministry of Waqf, the so-called "Workers' City," added low-income but urban families to this subarea. By 1960, this urbanizing portion of the western fringe had
At this point in time, however, the realignment is not nearly so obvious as the anomalies that exist in the district because of exigencies, but if there is any hope for the future of the area, it is the social and political forces which impact upon the population and its future. One frequently sees a squatter's mudbrick hut wedged between modern apartment buildings; the elaborate villa of a prosperous engineer across the street from a primitive village; goats and sheep herded down the elegant, tree-lined street that borders the Nile. This juxtaposition, as sharp and jarring as it is, is of a highly transitional character. The residents are doomed and pasting quickly.

Community XI—The Transitional Zone of Omeira

If, on the west, the Gold Coast must be mediated against the countryside by a Silver Coast, to the east of the core there is an even greater need for transition. The polar elements of Cairo urbanism are the Gold Coast on the one hand and the medieval city on the other. Thus, the belt between them must serve as both a divider and a binder. Upon its impinge, the conflicting impulses toward upward and modernization and modernization that press from the west and the impulses of deterioration that women equally persistently from the east; throughout it blend the two competing patterns in a juxtaposition that with the years grows less and less uneasy. Once Cairo was bifurcated into two cities and the twain rarely met, even in a true sense upon whose being substituted efficiently for physical barriers. To-day, however, the city grows more and more into one cultural unit. As the Gold Coast becomes increasingly "banded" and the sun-drenched cemeteries of the eastern suburbs the transitional belt between them—neither fish nor fowl—witnesses to mediate between the narrowing social contrast.

A transitional district is always difficult to delineate and even more difficult to describe, since its prime characteristic is flux. Lacking internal coherence and stability, it is to be known chiefly by its rate of change and the margin of its functions. The only legal element that unites Community XI is the fact that, with virtually few exceptions, the zone coincides with the area settled between the fourteenth and the late nineteenth centuries, whereas the two districts it connects were intensively settled either before or after.

At the extreme northern edge, the transitional zone serves to insulate the Westernized central business district of al-Tawfiqiyah from the slums of Bib al-Shi'ahy that encroach precipitously. Here formerly was the official prostitution district of the city but, since the withdrawal of official supervision and the suppression of the "trade," its former denizens have scattered in either direction—depending upon class—and other uses have taken over. Further south around the northern fringes of the Azabiyah Gardens were only slightly more salubrious tourist attractions—drakes in authentic and spurious antiquities as they arrived in the early days. The Azabiyah’s curse, however, which depended heavily upon the clientele stopping at Shephard’s Hotel facing the Gardens. Since the burning of Shephard’s, this area no longer attracts the "best customers," although the nearby Continental Hotel still survives, somewhat déclassé. Many of the shops followed the major hotels westward to the Nile and Garden City, leaving the tattered edge at Azabiyah even more run down.

The Azabiyah Gardens themselves have suffered a sad decline since their dramatic landcaping in 1869. Once they were an exclusive domain, fenced and with an admission charge, in which white-uniformed mamurs paraded pampered babies, to which European and those with European pretensions flocked to listen to the military band concerts, and in which exotic parrots and brilliant tropical birds fluttered from their well-tended cages. The fences have long since been removed and the admission charge dropped, a highway has been cut through its center, and, with the recent decline of the surrounding section, the park too has deteriorated. The grass is no longer lovingly manicured. Large brown areas show through the green cover along the more heavily trafficked short cuts. Noisy and garish al-freco cafés and an outdoor Arena Club and Casino have taken its place; the chefs and the Mird clothes and the caged are empty. Homeless or away-from-home men sleep during the hottest noon hours upon its once-elegant slopes, and whole families picnic where they please, dining with cutlery and bottles upon the Mird clothes and the cages are empty. Homeless or away-from-home men sleep during the hottest noon hours upon its once-elegant slopes, and whole families picnic where they please, dining with cutlery and bottles upon the Mird clothes and the cages are empty. Homeless or away-from-home men sleep during the hottest noon hours upon its once-elegant slopes, and whole families picnic where they please, dining with cutlery and bottles upon the Mird clothes and the cages are empty. Homeless or away-from-home men sleep during the hottest noon hours upon its once-elegant slopes, and whole families picnic where they please, dining with cutlery and bottles upon the Mird clothes and the cages are empty. Homeless or away-from-home men sleep during the hottest noon hours upon its once-elegant slopes, and whole families picnic where they please, dining with cutlery and bottles upon the Mird clothes and the cages are empty. Homeless or away-from-home men sleep during the hottest noon hours upon its once-elegant slopes, and whole families picnic where they please, dining with cutlery and bottles upon the Mird clothes and the cages are empty.
tended to decline during the same interval. Thus, of the sixteen census tracts with Factor I scores of +05 or over in 1917, only five improved between 1917 and 1920 while eleven declined. On the other hand, of the fifteen tracts with Factor I scores below -05 in 1937, twelve improved their relative standing between 1937 and 1950 while only three declined. It is significant that the rare exceptions (high-scoring tracts whose Factor I scores improved) were to be found just adjacent to the Westernized central business district of the Gold Coast, and in some cases at least their change in score could be directly attributed to a municipal redevelopment project. The exceptions at the opposite end (low-scoring tracts that declined) tended to be located at the eastern extremity next to the medieval city into which they were being incorporated.

Thus, the hypothesized and long-overdue transition is taking place. The enormous gulf between the indigenous quarters of traditional urban life and the initially alien modern quarters associated with the colonial incursion—so marked at the turn of the century—is finally being bridged in Community XI, a zone of transition in more than one sense of the term. It is safe to predict that, by the next census, an even more complete blending of the two social worlds will have been achieved.

THE SUBCITIES OF THE NEW NORTH

Five sector cities stretch northward, spreading apart like the fingers on a hand from their common origin at Azabkyah, to form the star-shaped and transport-linked city of the north. The “bone” of each finger is a radial transportation thoroughfare leading out from the city’s center. Along the waterfront is the linear city of Sahil, Grain in transit at Rawd al-Faraj near Sahil.

Rawd al-Faraj, actually an elongated tail that increasingly confirms its functional continuity with Bulaq; it has therefore been combined with that subcity in this analysis. The other four communities of northern Cairo must be described here to complete our survey of the metropolitan region.

Community II—Shubra, Lower-Middle-Class Melange

Radiating northward from the rear of Cairo’s major railroad station at Bibi as-Sabi, roughly circumscribed on the west by Shari’i Abu al-Faraj, and on the east by the barrier of a major railroad to the Delta, is the sector of the city known generically as Shubra. The district derives its name from the major transportation axis that bisects it, the Shari’i Shubra which formerly joined Mohammed Ali’s palace with Bulaq at Azabkyah but which now serves an even more critical function in linking central Cairo with the outlying and relatively new industrial complexes at Shubra al-Balad and Shubra al-Khaymah. The reader will recall the gradual transformation of this royal road into a fashionable carriage promenade and then into a streetcar axis, all prior to its urban development. Until World War I the sector was still largely agricultural, except for the few palaces and elaborate villas exploiting the access provided by the highway and for the buildings left unfinished by the 1937 panic. However, once fastened upon by the refinanced real estate speculators and jerry-builders of the first quarter of the century, its transformation was rapid and total. By 1917 some 282,000 persons were living in Community II; by 1920 this number had almost doubled to 524,000.

The sector city of Shubra contains wider variations than are to be found in other neighboring subcommunities, in terms of socio-economic status, ethnic composition and housing types. In general, there is a declining gradient of urban structures, of percent Copts and of socio-economic rank as one moves outward from the central origin point near the train station. This gradient, however, is not always consistent and, furthermore, has been pushing outward as the interior zones deteriorate and as the peripheral sites are converted from agricultural to urban uses. Poorer population from the interior city has been supplanting the middle class at the core just as the decentralizing urban population continues to supplant farmers at the periphery.

Perhaps the most significant fact about Shubra is that it has been the favored residential quarter for Cairo’s Copts for half a century, having been the logical geographic extension of the original Coptic quarter just north of the Azabkyah. Although Copts constitute perhaps a tenth of the total population of Cairo, within the inlying census tracts of Shubra their representation climbs as high as 45 to 50 percent. Perhaps a third of the popula-
THE CONTEMPORARY METROPOLIS

The scores of the census tracts of Shubra on Factor I, then, are averages of the diversity within the district and, as such, are less indicative of a single way of life than are the average scores of other subcommunities in the city. Nevertheless, they permit us to rank Shubra with respect to other parts of the city and to evaluate its functional role within the urban complex. In 1947 the average Factor I score for census tracts in the sector of Shubra was +0.39, identifying the zone as one of moderate status, somewhat better than the norm for the city as a whole but lagging far behind the true middle- and upper-class districts near the Nile and toward the desert edge at Heliope. By 1960 the average score for the zone had improved to +0.55. This increase appears to be due to two complementary but independent trends: a conversion at the periphery from rural to urban uses, which has meant a population supplementation if not total displacement of low-socio-economic groups; and a gradual assimilation of the rural migrants who temporarily swelled Shubra's less savory subcommunities during World War II and have now become better adjusted to urban life and more securely integrated into the urban economy.

Community III—A Northern Agricultural Wedge

Cutting deep into the asymmetrical city is a residual wedge of farmland to remind us that, until recently, the northern section of Cairo, although officially classified as urban, has been a farming area. This residual wedge has faded quite sharply into the granary of the Delta. In this wide swath of land, at least equal in area to all of Shubra which abuts on the west, lying between two major railroads that rigidly define its peripheries, almost totally devoid of transportation links to the center city, lived close to 100,000 “Cairenes” in 1947 and over 200,000 in 1960, under conditions which, except in the more urban portions of Shahrabiyah and Matariyah, approximated those of any rural area in Egypt. (Another exception, added too late to appreciably affect the statistical results recorded in the Census of 1960, is to be found in several large public housing projects that have recently been constructed by the municipality in this sector.)

These facts that link Cairo with the towns of the Egyptian Delta. These losses were the main reasons whereby Delta migrants reached the city during the war boom of the early 1940s. If the locations of the migrant associations organized by these recent arrivals are used as an indirect index to where migrants first settled, we find that many must have remained very close to their port of entry, the bus terminal itself. In the early 1960s, eight village associations had addresses within a quarter of a mile of the terminal, and sixteen were found within a half-mile radius of it. It is significant that all of these were for Delta villages; none represented Upper Egyptian villages associated with the Nile valley. The addresses of the latter tended, on the other hand, to be concentrated in the southern portion of Cairo.

145. Rural-style housing in Community III, since replaced by public housing

Although most of the land is in agricultural use, the occupational characteristics of the resident population are somewhat more diversified. Some 20 percent of the employed men in the entire zone were listed as full-time agriculturalists in the Census of 1947, a proportion that had declined to under 4 percent by 1960. On the other hand, most of the women with “occupations” (other than housewives) were listed as being engaged in farming, and many of the men were undoubtedly part-time agriculturalists in addition to their other employment. The railroads and railyards that define the limits of the district also offered major employment opportunities to the men. These have been supplemented in more recent years by the new industrial plants built and run by the government, which have attracted some of the residents to industrial employment.

The shift from agriculture to industry is easily documented. Despite the fact that population in the sector doubled between 1957 and 1960, the number of full-time agriculturalists actually declined. The number of industrial workers, on the other hand, doubled to match the population growth. This indicates a gradual transformation in the functions of this zone, but the transformation, except in the new public housing projects, is not yet evident either in housing characteristics or in style of life. Indeed, as the urban quality of the inlying areas of Cairo has improved over the years, all fringe areas, including this northern one, have declined relative to the improving norm. In 1947, the average score on Factor I for census tracts in this sector was −1.35; by 1960, despite the industrialization already evident in the zone, this score had dropped to −1.47. This does not necessarily mean that the zone deteriorated in the interval. Rather, it improved at a slower rate than most other sections of the city, thus leaving it farther behind in the race toward modernity.

Despite the involvement of many of the area’s men in the expanding urban economy, the dominant way of life in this subcity has not altered much; it still remains closer to the rural than the urban mode. This can be recognized most clearly by comparing the district with Biliq, the not-too-distant urban slum, on two of the dimensions of differentiation. The zone ranks considerably below the urban slum on Factor I, suggesting that illiteracy is almost universal, especially among the women, that it is only a rare child who is fortunate enough to attend school for any length of time if at all, that marriages are entered into at extremely early ages, and that large families are the norm. On the other hand, most of the urban forms of social disorganization, such as divorce, undistinguished unemployment, and attractiveness to handicapped dependents, are relatively absent from this zone. The scores on Factor III (measuring relative “social disorganization”) of census tracts in the agricultural wedge are considerably below those of the Biliq census tracts, suggesting that while poverty may be more extreme on the periphery, its devastations are mitigated by a tightly organized social structure, in much the same way that the villages of Egypt, despite their physical deprivations, manage to maintain a stable and controlled social environment.

The future of this residual wedge is uncertain. Recognizing the need to assure sufficient truck-gardening activity to supply the growing metropolis with its daily requirements, and desiring to limit the physical sprawl of the urban area, the chief planner of Cairo has recommended that a greenbelt be established—a move that would protect this agricultural wedge, among other areas, from further urban encroachments. On the other hand, the Ministry of Industry has tended to favor this zone, which is so well served by rail-lines and so temptingly open for future expansion. The future of this zone depends not only on the extent to which housing for employees must be provided as an adjunct to the plants. Given the conflict between the two goals, only political processes will determine the future disposition of the zone. Nevertheless, with the present stress on industrialization, it is very probable that industrial uses will usurp more and more of the agricultural land and that this sector city will eventually become the primary site of heavy industry, and associated housing developments for industrial workers. It is perhaps appropriate that the city of the north, conjugated into exist-
148-149. Along the major axis

A problem which inevitably plagues cross-cultural comparative research is that the standards of the observer impinge upon the subject matter to distort judgment and even perception. This certainly occurs when the Western scholar tries to understand a phenomenon so different from his relevant experience as Cairo. To most Western observers (including myself when I first began to investigate the quarters of Cairo), the district here classified as solid working class would seem to be a slum; in many respects it is an Oriental version of such well-known prototypes as the South Side of Chicago, the Lower East Side or Upper Harlem of New York, the North End of Boston, or Bethnal Green of London—in short, any urban slum in an industrialized nation. The streets, although paved, are inadequately cleaned, and rubbish tends to accumulate more quickly than it can be cleared; children engage in their traditional rowdy street games, kicking cans, stones, or other ball-substitutes and hazardous accidents with cars and passers-by; tall buildings with walk-up flats or cast-iron doors elevate forces unintended encounters; and windows opening on airshafts in tenement-type structures yield an auditory intimacy that permits one to follow in close detail the family squabbles of the neighbors. Children are admonished or called to dinner by mothers who lean over the edges of narrow balconies to signal them. The grocer across the street receives his orders by similar shouts. Whole conversations may be carried on at high pitch by neighbors with adjoining or opposing balconies, and one may often view through the open balcony doors of the flat across the street the life of a neighbor, as if it were being performed on a stage set. Meals are not particularly regular nor are the members of the household undervalued: whoever happens to be present at mealtime is fed; whoever happens to be there at nightfall is offered a mattress to sleep on. A kind of casual, noisy, sometimes violent but often just exuberant spirit fills the air—a quality that for hundreds of years in various parts of the globe has alternately attracted and repelled middle-class investigators and social workers. It is this quality that unites the district, for all the superficial distinctiveness of its odors and dress, with lower-class working districts throughout the world.

But these qualities and this way of life do not make Community IV a slum. The housing is too solid and the occupancy rates, although in excess of Western standards, are moderate in comparison with El-Miṣr, the medieval city, or Miṣr al-Qadimah. The people, also, are too close to the middle of a pyramid of social status in Cairo to be classified as slum residents. Their educational level is not high, it is true, but neither is the average for the city as a whole. Their families are not small, crowded, but neither could the typical Cairene family (average size 4.7 persons) be characterized as small by Western standards. In fact, on almost every variable, except the percent Muslims, which is higher in these census tracts than in the city as a whole, the rates found in this zone come very close to the overall average for the city. Again, quite typically, education is highly valued and a technical skill is much admired as a passport to security—but these values are chiefly projected onto the younger generation rather than applied personally to the parental one. Semi-skilled is the dominant labor force classification of workers living in this area. Commerce, industry, and services absorb most workers (scarcely any are in agriculture, despite the proximity to the fringe) and, although the data do not reveal at what levels, the likelihood of their being in the white-collar or managerial peaks of these industrial categories is slim indeed. The break with rural origins, however, has already been made by the residents of this zone, although they may occasionally receive relatives from the countryside, either as visitors or as new migrants whom they guide over the first hurdles of the urban transition.

It is here more than elsewhere in the city that one finds the crucible in which the Cairo of tomorrow—maturing beyond the ethnic fusions and life style ex-
even the most inferior strip abutting Community IV.

For those familiar with the neighborhoods of Cairo, much will be conveyed when it is noted that this middle-class district includes the census tracts of al-Zahir and al-Faydallah, within the Faculty of Law campus of Ain Shams University, taken in the new apartment house district at 'Abbasiyyah, includes Nasr City, the new community now being reclaimed from the desert, as well as Helopoli (proper) (Miyr al-Jadidah, the New Cairo), the prototype city that had been planned in similar fashion half a century earlier. The zone, while definitely of high status and prestige, was never particularly favored by the extremely rich, except by a minority who sought extensive sites on which to construct palatial single-family residences. And, despite its "foreign" origin, it never was quite as exclusive as the Gold Coast. With the exception of the older baronial halls and hotels and now a sprinkling of neat villas, the district, like most of Cairo, is dominated by multi-family flats. Unlike many other parts of Cairo, however, the apartments are spacious, newer, and more modern in design. Both the older middle class (disproportionately either Coptic or foreign of Mediterranean rather than Northern European origin) and the rising middle-class technocrats, among whom Muslim Egyptians are proportionately better represented) have mixed freely in this zone, although the older middle class tends to be concentrated in the interior portions while the newer middle class—latecomers to the zone—tends to be concentrated in the more peripheral sector.

In 1947 the average factor of score of tracts in this subcity was 4.13, indicating that the zone deviated from the "normal" quite markedly, although it still ranked below the Gold Coast. By 1960 this average score declined somewhat to 1.1, although its relative rank among the thirteen subcommunities remained second. This decline, like that experienced even more drastically in the Gold Coast, could be attributed largely to the departure of the foreign communities of Cairo, already noted above. While a direct measure for this is lacking, the phenomenon can be partially traced in the decline of non-Muslims as a percentage of census tract population. Whereas in 1947, Muslims had constituted 42 and 24 percent of the populations in the census tracts of Community V, by 1960 the range had shifted to between 41 and 94 percent. The median was 61 percent in 1947, 73 percent in 1960.

Despite the rather high representation of Christians and foreigners in this zone, however, the style of life—the dominant "tone" of this area—is set by the upper-middle-class Egyptian who has not been as alienated from his native identity as his francophile and somewhat more "sophisticated" counterpart in the Gold Coast. The

154. Roxy, the central business district of Helopoli, old domestic virtues are highly prized here; social gatherings are still largely segregated by sex, even where there is no attempt to enforce such separation; kinship involvements still dominate leisure-time use; and eating is an organizing principle of life (although drinking alcoholic beverages remains an anathema). In this zone, possibly more so than any other, one sees symbolized the new aspirations of contemporary Egypt (perhaps this is one reason it has been favored by the elite of military officers), and one begins to discern the outlines of potential synthesis. It is apparent that this new synthesis will not simply ape the West in uncritical and uncomfortable fashion, even though competition for Paris-style dresses or Parisian-styled bars may be intense in the female gatherings and Parker pens the equal sign of prestige among the men. Nor will it reject out of hand what Western technology, now becoming Egyptian technology as well, has to offer. Rather, it will tend to extract the technological conventions of industrial society (flush toilets, refrigerators, semi-automatic washing machines, television sets) from their value contexts and adapt them to individually defined goals.

Substantial confirmation of the modern as well as middle-class status of the district's residents is found in their occupational characteristics. They are almost exclusively engaged in commerce or professional services, with a high proportion occupying managerial and white-collar positions in both private and public enterprises. The zone's ability to attract members of the growing bureaucracy is likely to have immense even more as the governmental ministries are progressively relocated in Nasr City and as business uses further decentralize to serve the fast-growing peripheral districts. And given the goals of the New Egypt, this zone cannot help but profit from some of the residual sons which still cling to its chief rival, the Gold Coast. A final factor that should assure continued growth is the relatively recent appearance of the private family car—formerly a monopoly of the very rich as carriages had once been of the royalty—as
### Table 8. The Communities of Cairo in 1947 and 1960

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<tr>
<th>Communities</th>
<th>Average Factor I</th>
<th>Population in Thousands</th>
<th>Total Percent of Total Population</th>
<th>Total Percent of Total Area</th>
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<td>Rural Fereges</td>
<td>-1.35</td>
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<td>-0.37</td>
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<td>474</td>
</tr>
<tr>
<td>Misc al-Qaldinian (XII)</td>
<td>-0.45</td>
<td>-0.54</td>
<td>103</td>
<td>188</td>
</tr>
<tr>
<td>Urban Working Class - Low</td>
<td>-0.10</td>
<td>-0.08</td>
<td>187</td>
<td>456</td>
</tr>
<tr>
<td>Tahrir (IV)</td>
<td>-1.17</td>
<td>-0.30</td>
<td>246</td>
<td>362</td>
</tr>
<tr>
<td>Urban Middle</td>
<td>-0.45</td>
<td>-0.62</td>
<td>228</td>
<td>322</td>
</tr>
<tr>
<td>Tripolitania (XI)</td>
<td>-0.45</td>
<td>-0.62</td>
<td>302</td>
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<tr>
<td>Shubra (II)</td>
<td>-0.65</td>
<td>-0.45</td>
<td>258</td>
<td>321</td>
</tr>
<tr>
<td>Silver Coast (VIII)</td>
<td>-0.46</td>
<td>-1.18</td>
<td>135</td>
<td>225</td>
</tr>
<tr>
<td>Upper Middle</td>
<td>-0.22</td>
<td>-0.18</td>
<td>172</td>
<td>261</td>
</tr>
<tr>
<td>Better</td>
<td>-2.18</td>
<td>-0.97</td>
<td>65</td>
<td>122</td>
</tr>
<tr>
<td>Gold Coast (VII)</td>
<td>-2.18</td>
<td>-1.67</td>
<td>72</td>
<td>119</td>
</tr>
</tbody>
</table>

* Several areas omitted from computation, as noted in text.

Modern urbanism, on the other hand, is equally evident in the upper-income zones of Heliopolis and the Gold Coast, where the skilled managers and members of the liberal professions have lived. Until the 1960s, these were areas of "modern development" in Egyptian society. In 1947, only 11 percent of Cairo's population lived in these distinctively modern quarters, a percentage that had declined to 2 by 1960, partly due to the exodus of the minority groups and partly due to the fact that these zones were no longer the only ones favored by the modernized segments of the population. As the base of modernism has broadened, so too have the modern quarters grown in number. Much of the Silver Coast now shares qualities which formerly were to be found almost exclusively in the Gold Coast or Heliopolis.

Modernization, on the other hand, is clearly evident in the upper-income zones of Heliopolis and the Gold Coast, where the skilled managers and members of the liberal professions have lived. Until the 1960s, these were areas of "modern development" in Egyptian society. In 1947, only 11 percent of Cairo's population lived in these distinctively modern quarters, a percentage that had declined to 2 by 1960, partly due to the exodus of the minority groups and partly due to the fact that these zones were no longer the only ones favored by the modernized segments of the population. As the base of modernism has broadened, so too have the modern quarters grown in number. Much of the Silver Coast now shares qualities which formerly were to be found almost exclusively in the Gold Coast or Heliopolis.

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the average weekly wages paid in Egypt in January 1975 for 25 industry groups for which this information could be assembled. The benchmark for comparison was $4.00-

11 One rather sensitive index of modernization, at least in the field of economic activities, is the scale of operations. Just as preindustrial societies and industry were organized around the family-sized firm, so modern enterprises tend to achieve their economies by increasing the average size of the establishment.
The rest of Cairo's population resides in the remaining communities where traditionalism and modernism still coexist somewhat uneasily. In each, however, the blend is in different proportions and in all the amalgam itself undergoes daily transformation. Especially in the working-class zone of Zaytuna and the lower-middle to middle-class communities in the island belt, and, to a lesser extent, the Silver Coast, the modern and the traditional remain intimately intertwined, even within the same families. A middle synthesis is being sought which holds together some of these future possibilities. Physically, each of these factors oscillates between and modulates the contrasting worlds that flank it. Internally, as well, each contains contrasts which are due in part to generational changes, in part to shifts in upward social mobility, and in part to changes in place of birth or origin. The middle class is now embarking on drastic social change, and in these "gray" areas which the middle class calls home, both rural and traditional roots are being exchanged for the modern future promised by the Revolution. The dreams being nurtured here, the pains that are being felt as the price of change, and the conflicts that are being resolved by this group mostly caught in the cultural cross-currents of contemporary society are those which will best an increasing number of Egyptians as their society is transformed by modernization. These zones are "transitional" in more than a physical sense. They are likely to represent more and more the Cairo of tomorrow. The student of that future city would be wise indeed to examine them with care.

This chapter has described the nature of Cairo today as the securely entered stage of urbanism. While she has traveled far from her genesis as military-administrative outpost between river and desert, certain recurrent functions have unified her progress. Early in history she added to her initial function of defense the coast as a citadel, exploiting her strategic position at the crossroads between the African interior and the Mediterranean coast, and then later her site at the even more important axis between Europe and the Orient. Since the time of the Pharaohs she has also periodically served as the central governmental seat for important empires that extended far beyond the traditional limits of Egypt, the river valley region insulated by deserts. During the Pharaohs, Ayyubids, and Mamluk eras, the wealth of these empires was distilled to support her function as center of production and consumption. Even through the darkest days of Ottoman subjugation, when both commerce and control contracted, she kept alive a tradition of pre-industrial urbanism, supporting an urban population which, while reduced in size from previous peaks, could never be dismissed as insubstantial. With the economic renaissance of Egypt in the nineteenth century, Cairo again played a role as consumption center and, after the opening of the Suez Canal, she again began to benefit from Egypt's key geographic position. Most recently, Egypt's political independence and her growing influence within the Arab world have enhanced the city's role as ideological and cultural center, while the current crises in industrial development have again restored to the city her productive function as center of commerce.

Throughout, Cairo's condition has been tied to the wider fate of Egypt and its surrounding region and to the central fact of Egyptian existence, the Nile. The changes now taking place in Cairo, vastly different as they may be from the past, are still linked to the countryside and the river. The new industrialization, which will have so marked an impact upon future development of the metropolitan region, is a national not a local policy and depends upon the electric power generated by a harnessed Nile no less than the agricultural wealth of this ancient granary once dependent upon its unfettered flow. Furthermore, many of the new industries depend for their raw materials upon expanding agricultural production for which the measured distribution of irrigation waters remains essential. Industrial Cairo, no less than preindustrial Cairo, retains a peculiar symbiotic relationship with the countryside.

The Cairo that these new developments are ushering in will undoubtedly be a different city from the Cairo of the past or even today, but I cannot believe that the cultural and geopolitical continuity, sustained for more than 1,400 years of the city's existence, will suddenly be severed in the industrial age. The paradox of unchanging nature in the face of continual change finds an important illustration in Cairo. Nevertheless, many of the problems which the city faced during earlier moments in her history have been or are being solved. Parts of her heritage even now grow weaker and more closely extinct. In their place are new problems and a new heritage, the broad outlines of which can already be discerned on the horizon. The city's geographical extension will most certainly occur in her material existence can readily be predicted. Whether this newer level of technical achievement will necessarily lead to greater convenience and a more satisfying social existence still remains problematical. Certainly, the examples of Western metropolitan centers which, when both commerce and control contracted, she kept alive a tradition of pre-industrial urbanism, supporting an urban population which, while reduced in size from previous peaks, could never be dismissed as insubstantial. With the economic renaissance of Egypt in the nineteenth century, Cairo again played a role as consumption center and, after the opening of the Suez Canal, she again began to benefit from Egypt's key geographic position. Most recently, Egypt's political independence and her growing influence within the Arab world have enhanced the city's role as ideological and cultural center, while the current crises in industrial development have again restored to the city her productive function as center of commerce.

1 Some impressive figures have been compiled by the Egyptian economist, Sayd, al-Najjar. See his "An Economic Analysis of the Metropolis," in The New Metropolis in the Arab World, ed. Morroe Berger (Allied Publishers, New Delhi and New York: 1967), pp. 143-166. For example, in 1957 Cairo consumed 43.3 percent of all the electric power in Egypt, in 1944, 39 percent of all the establishment for gross trade, in 1956 consumed 53.2 percent of all privately owned telephones in the country. Cairo, together with Alexandria, is the major exporter of the Nile. In the various sectors of convenience, supplied to 94 percent of "value added" in Egypt in 1957 (for firms employing a minimum number of workers). An analysis of the five-year plans for economic development, prepared by Ahmet Riziq and presented in mimeographed form to the same conference, indicated continued if not more intensive concentration of industrial development in Cairo.

13 Whither the City: A Prospects

By 1975 the population of Cairo should exceed 7 milion—excluding the residents in the northern industrial periphery at Shubra al-Khayyam and in that integral part of the metropolitan complex lying on the west bank of the Nile. This projection is conservative, being based upon the assumption that current growth rate of a peak setback by a series of political, economic, and social factors. An increment more and more easily assured by the rising rate of natural increase in the city, even in the absence of massive migration. In common with all previous projections of Cairo's growth, our estimate is likely to err in the direction of undercount. The actual population will be no less, short of unpredictable acts of God, but may be considerably more.

By that year Cairo will contain more than one-sixth (ca. 17 percent) of Egypt's population of 40 million; the metropolitan region as a whole may account for almost one out of every five Egyptians. Planning the living environment for so great a proportion of the country's population must, therefore, be a critical part of Egypt's plans for development, if she is to achieve her goals of sustained economic growth, higher income, and better living conditions. There is yet another reason why plans for the city cannot be separated from plans for the country. Cairo plays a dominant role in the modern economy, concentrating within her orbit much of the production, marketing, and distribution, and virtually all of the coordinating networks that increasingly directly development. And from among her population are drawn much of the brain and virtually all of the brains that run the modern economy. Although many of the latter may have been born in the hinterlands, they now live in Cairo and identify with that city, even when temporarily assigned elsewhere. Together with the twin magnet of Alexandria, Cairo represents an even more important factor to Egypt than population alone would indicate.

Perhaps in reaction against the present exploitative role of the capital as the center of alien dominance, there has been a certain reluctance—which now seems to be passing—to give the city her due. For too long the countryside represented the Egypt of the Egyptians, whereas the "capital" symbolized a permanent growth which was to the ultimate consumption was achieved through conscience- less muling of the fulbar. There existed an ambivalence—a pride in the greatness of Cairo but also a rejection of her symbolic association with "the government." Even after the revolutionary regime succeeded in making that government indigenous, some residual ambivalence remained. Improvements in the city were viewed suspiciously as luxuries which ought to be postponed until the farmers, who for too long had been totally overlooked and who still constitute the overwhelming majority of Egyptians, had been aided through preferential treatment. This early ideology has apparently now given way to a more balanced view. City and countryside are seen not so much as competitors as symbiotic outlets for balanced investment, the welfare of each dependent ultimately upon the other.2 The city is too critical a link in the plans for economic development to be slighted for ideological reasons, the grounds for which, in fact, no longer exist.

Just as Cairo has become more rather than less important to the whole with every advance in Egypt's industrialization, so within the city itself a similar shift has been occurring which confers upon the modern quarters of Cairo increasing importance, as socio-economic development proceeds. In 1957, according to my estimates, only about 15 percent of the city's labor force was involved in the modern sector of the dual economy, and that insignificant proportion consisted largely of foreigners. By 1970, when my figures were compiled, that proportion had shifted so far that almost half of the labor force


3 But the physical problem is much more extremely. It is only illustrated in a paper by the former head of Egypt's Higher Planning Institute, Ibrahim Hulwa Abdal-Hakim, "Relations between Urban and National Planning," in The New Metropolis, pp. 189-209.
The contemporary metropolis

of the city could be described as participating in the modern sector. By 1970, this should comprise some two-thirds of the city population. Most of Cairo's population already lives in quarters of the city that date from the present century. By 1970 the proportion living in the oldest zones should be no more, and perhaps less, than 25 percent. While the need to replace and perhaps improve these sections remains great, it is also true that the need to service adequately the newer quarters and to preplan zones even now being converted from rural to urban use is pressing.

The combined impact of these two trends and the higher percentage of Egyptians concentrating in Cairo and the larger percentage of Cairenes involved in the modern economy and residing in the zones of recent settlements makes what happens in Cairo a prime test of what will eventually happen in the rest of the country. If Cairo is Egypt's showcase to the world, she is also Egypt's testing ground for the future. What trials she has faced thus far and how she has sought to meet their challenge?

While others might compile a somewhat different list, it appears to me that several types of problems have salience at this juncture in the city's history. First, how can a metropolitan center like Cairo, which is so central a position in the entire economy and power structure, be governed—especially in the face of its traditional lack of corporate identity and its prior inexpertise in self-determination? Second, how, in a situation of extremely limited financial resources and heightened competition between industrial investment and urban overhead can the city be kept from deteriorating to a dangerous point, in the face of the heavy demands that find rapidly increasing population places on housing, utilities, transport, and other public facilities? Third, given the present decision to depend upon public rather than private investment, how can the government develop the urban environment to be planned for and executed in the sphere of city building—traditionally the cumulative product of a multitude of private consumption-investments? Fourth, to what extent should low-income group housing be given priority in public investments, in view of the already severe housing shortage and the continued immigration from rural areas where housing standards fall far below those for urban areas? And finally, is there any way to deal with the problem of urban growth in Cairo that could maximize both Cairo's capacity to cope with her short-run problems of congestion and Egypt's future capacity to develop balanced regional economies?

Each of these have been the focus of study and debate in Egypt, and it would therefore be presumptuous on my part to offer solutions or advice. The purpose of this chapter is more modest. I shall attempt to chronicle here some of the approaches explicitly attempted or implicitly espoused in Cairo's most recent efforts to deal with problems which will continue to challenge her in the years to come.

Within the past two decades considerable progress has been made in providing Cairo with greater control over her destiny and in assimilating within a single administrative framework the multitude of separate agencies for decision-making which previously had been uncoordinated and diffused. The era of the private concession has been brought to a close. These separate empires of municipal services have finally been made a part of the city, responsible and hopefully more responsive to the overall needs of the community. This process was well under way even before the Revolution of 1952, which merely completed the task. For example, in 1947 when the concession of Lebon et Cie expired, the government took over the company's installations for electric light, power, and gas within the Cairo District and has since operated the utility through a special administration.6 The Cairo Water Works is similarly administered under the municipality and, while it has its own budget, this is subject to negotiation with the administration of the transportation system of the city, which until 1956 still remained under the control of foreign concessions, became a nationalized concern under government control, and, most recently, indirect influence has been exerted in favor of incorporating this medieval survival into the framework of modern planning. A ministerial order issued in that year called upon the Ministry of Water to take over all real estate properties under its jurisdiction to the governorates in which they were located, henceforth to be managed directly through the governorate offices. For the lands that were to be used for public purposes, the 1956 laws required the recompense of the Ministry of Water to 90 percent of the value of the property; for those properties taken but not required for public purposes, the governors were to recompense to 90 percent.

In addition to the private concessions, there had been another "government within a government," the Ministry of Finance. Here the proportion of Cairo's real estate and which, through its proceeds, had access to financial resources over which it exercised discretionary control. So long as this ministry stood in opposition to the nominally dominated administration, arguments could be advanced that it represented a sacred rather than secular authority and, as such, could claim exemption from the regular framework of public finance. But its defense of its intransigent autonomy became more and more tenuous as the government became indigenized and assumed responsibility for welfare functions that formerly had been performed through the institution of waqf. Under these conditions, how could funds available and indeed earmarked for welfare purposes be allowed to remain un integrated with overall national plans for development and public services? The first waqf reforms in the 1950's had affected family endowments only. The waqf khayri persisted and, at first, there was an attempt to maintain the autonomous administration of these properties. But while they were nominally left in the hands of the Ministry of Waqf, pressure was exerted to guide and cajole the admittedly compliant ministry to invest its funds in projects which fitted into the overall needs of the community, as those needs were defined by the administration. The construction by the Ministry of Waqf of the Vagabondos' City at al-Marj and of several public housing projects for low-income tenants was undertaken during this interim period of coexistence.7 In 1969, however, indirect influence was augmented in favor of incorporating this medieval survival into the framework of modern planning. A ministerial order issued in that year called upon the Ministry of Waqf to turn over all real estate properties under its jurisdiction to the governorates in which they were located, henceforth to be managed directly through the governorate offices. For the lands that were to be used for public purposes, the 1956 laws required the recompense of the Ministry of Waqf to 90 percent of the value of the property; for those properties taken but not required for public purposes, the governors were to recompense to 90 percent.

* Among the construction projects attributed to the Ministry of Waqf during this period were 95 apartments and 578 shops and other buildings (at a cost of LE 8.5 million), as well as two "popular" (i.e., low-income) housing projects: one containing 1,594 dwelling units at a cost of LE 17 million, another with 1,007 dwelling units at a cost of LE 35.6 million. See U.S.A. Agency for International Development and the Egyptian government: "AIDS in Development: a Sample Study of the Use of North American Knowledge and Technology in Egypt" (1970).


8 In a meeting of the Cairo Council which I attended in the summer of 1959, pressure was being exerted by the elected representatives of certain old and historic quarters of Cairo to have all public works, including any of their labor force, done in these areas in areas not yet cleared for subdivision by the Planning Department.

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of the value, the residual 10 percent being absorbed to defray the costs of administering the properties. I have been informed by the former Minister of Finance (now the waqf khayri properties that were, by this order, made available to the Governorate of Cairo for direct management and development. But even if it has not been substantiated, the government's declared intent to use the properties to enhance the city's competitive power and the addition even of scattered plots of land to the store of parcels over which the governorate exercises direct control cannot but strengthen the hands of Cairo's planners.

Local government and home rule also are no longer issues in Cairo, even though the process of trial and error still continues in search of a viable method for translating rights into daily practice. The peculiar role of Cairo in the national economy and the long tradition of national involvement in the governing of the capital have given rise to a system which deviates in fundamental respects from the pattern of local government that evolved in the United States. For that reason, the municipal structure of Cairo may appear somewhat unusual to the Western student. However, while the system seems to have its own special weaknesses, it also has a strong potential for solving certain problems of social and economic development in areas in the United States, because of their excessive concern with home rule, have been unable to deal with effectively.

Ever since 1949 Cairo has had juridical personality. The Municipality (Baladlyah) by Law 145 of that year was inaugurated in 1950 and assigned all the municipally and under the jurisdiction of all the government departments. Works. In that same year a new Ministry of Municipal and Rural Affairs was established which absorbed the administration of public services, local commissions, and the public works (which had formerly been under the Ministry of Health). The law establishing the Municipality of Cairo, however, primarily changed the status of an anomalous level governing the city and added the formality of a town council; it neither solved the problems of overall coordination nor established true representative government. The relationship between the new Baladlyah and the other existing governing bodies, the Governorate (Moldilah), remained relatively unspecified, although the former bore chief responsibility for housing, planning (and advisory) functions in the city whereas the latter, under the Ministry of the Interior, continued to be responsible primarily for the maintenance of law, order, and security. Under these conditions, the Baladlyah office, headed by an engineer in a capacity similar to a technician-city manager, enjoyed a certain amount of autonomy, albeit
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with strictly circumscribed powers and a very narrowly defined span of jurisdiction.

In 1950 a new law (No. 124 on Territorial Administration) was promulgated, establishing a Ministry for Local Government to be responsible for a uniform system of local government within the framework of the then-recently established National Union, a preliminary approach to representative government soon superseded by the Arab Socialist Union. This new law abrogated conflicting clauses in the 1949 law and allowed the effect of merging the Baldiyah and Mashafah of Cairo into a single entity, in which the former chief of the Baldiyah became an officially appointed directly responsible to the Governor of Cairo. Eventually, the subcommittee was renamed the Department of Housing and Public Utilities. This department was subdivided, as before, into separate sections to deal with planning and buildings, circulation (roads, bridges, and license), drainage, electrical and mechanical equipment, and public gardens, as well as an adjunct authority to deal with public housing. Other departments in the Maslahat, on the same administrative level, include Education, Social Affairs, Youth, Welfare and Health.

While each of these divisions retains a stronger relationship to the relevant national ministry than would certainly be true in the United States—but not necessarily in France with its centralizing administrations—at least they are now gathered together under one roof where their decisions of planning and budgeting can be if not coordinated at least coordinated.

Another important development of this law was the empowerment of the President of Egypt to establish the boundaries of all governates (or mushafahat, of which Cairo is one of twenty-four). Theoretically, at least, the power thus exists to control the regional government which would conform realistically to the functional unit required to plan the metropolis; this is a power which many Western metropolitan planners might well envy.

Thus far the law as created by this law has not been exploited in a fashion to gain the confidence of the many persons deeply concerned with planning the future metropolis. The boundaries adopted for Cairo were those which had been in force since the 1950s, i.e., while they extended the limits of the Cairo region, it included all of the urban area, i.e., all of the city was within the boundaries of the Cairo region, it included all of the city. This has led to the creation of a single emirate, the city of Cairo, which operates under the same administrative structure as the rest of the country. While this structure has allowed for greater efficiency and coordination, it has also led to the concentration of power in the hands of the central government, which can be seen as a limitation on local autonomy and self-governance.

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signed to improve the law's implementation, were adopted in 1962.

2. As explained by Mr. Mohammad El-Ashry 'All in a personal interview in July 1976, a slightly different law was in effect since 1975, local government was abolished and replaced by a system of local councils, with elected representatives at the grassroots level.

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6. The 26 ex officio members include: an undersecretary of the Ministry of Public Works; Director-General of the Cairo Department of Supply; Banking Supervisor for the Ministry of Finance; Inspector of the Ministry of Ministry of Finance; Director of the Ministry of Finance; Director-General of the Ministry of Social Affairs; undersecretary of the Ministry of Health; director of the Ministry of Transport and Communications; undersecretary of the Ministry of Education; undersecretary of the Ministry of Higher Education; director of the Ministry of Culture and National Guidance; representative of the Ministry of Industry; representatives from Cairo University, Ain Shams University, and the Cairo University; Director-General of the Cairo Water Works; the Director-General of the Egyptian Educational Districts of Cairo; an undersecretary of the Ministry of Education; etc. This list appears in the edition published in 1969. Whether this list remains current or if any members of the government have been replaced since Alderete's report cannot be determined.

7. A new law (No. 124 on Territorial Administration) was promulgated, establishing a Ministry for Local Government to be responsible for a uniform system of local government within the framework of the then-recently established National Union, a preliminary approach to representative government soon superseded by the Arab Socialist Union. This new law abrogated conflicting clauses in the 1949 law and allowed the effect of merging the Baldiyah and Mashafah of Cairo into a single entity, in which the former chief of the Baldiyah became an undersecretary responsible to the Governor of Cairo. Eventually, the subcommittee was renamed the Department of Housing and Public Utilities. This department was subdivided, as before, into separate sections to deal with planning and buildings, circulation (roads, bridges, and license), drainage, electrical and mechanical equipment, and public gardens, as well as an adjunct authority to deal with public housing. Other departments in the Maslahat, on the same administrative level, include Education, Social Affairs, Youth, Welfare and Health.

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WHETHER THE CITY: A PROGNOSIS

"Ali Sabri dedicated the new facilities. Among the projects undertaken were demand for sewer replacements of defective or inadequate sewer pipes and mains as well as repairs, enlargements, and additions to the pumping stations. At the site of the new station, Jhunah, Jhal & Port Said (al-Khalil) Street, at an estimated cost of a quarter of a million Egyptian pounds.13 Recommendations for future projects and pumping stations were also made by the committee.

It is not known, however, whether their recommendations also directed attention to the underlying conditions that had led to the emergency or whether they suggested means for building into the day-to-day operations of the municipal government the powers necessary to avert future recurrences. This seems unlikely. Without such recommendations, however, a dangerous precedent has been set which cannot help but undermine the autonomy and self-reliance of the Governorate, although the latter has been a goal avowed by the government and supported both by legislation and executive directives. The attractiveness of this short-cut method to effective action in crisis situations cannot be denied, and the temptation to extend this principle into other areas seems to have become irresistible. The public transit system, for example, has also been subject to severe overload conditions, due to an enormously increased demand coupled with the failure to replace, repair, or add to the necessary stock in sufficient force to meet it. Again, an emergency expedient was resorted to when the army was assigned the special task of coping with the mass transit crisis in the city.

A final example, designed to deal with problems of a somewhat different nature but according to the precepts established, is "to get around" the limited potency of existing units of government. The issuance in early July 1965 of a republican decree by President Nasser forming a Higher Committee to supervise the performance of the Cairo Metropolitan Region and the execution of necessary projects. According to a contemporary newspaper account,14 the committee was entrusted with the responsibility for drawing up a comprehensive plan for the Cairo Metropolitan Region, including "all its public utilities and its requirements of an urban capital," with setting a time schedule for the execution of plans, and with coordinating the efforts of all bodies concerned with executing these projects. The decree further stipulated—and herein lies the problem of the committee's decision—

...
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sions are to be considered "final and will have to be observed by all Ministries, Governmental organizations, and authorities after being approved by the Prime Minister." The committee is to have its own independent budget, but the funds being allocated to it by the Minister himself, whom is to the Deputy Prime Minister for Local Government and Services the committee is required to submit reports of its deliberations and decisions.

To what extent does this committee envisage the government of the Cairo Government and the operating departments of the Governorate? Although this appears to have been the interpretation of the ex-Governor of Cairo who resigned within a few days of this announcement, only time will tell whether the committee can even prove effective enough to seriously threaten existing units of government which, after all, are represented on the committee. If, however, the committee does succeed in its mission, this attempt to circumvent rather than strengthen normal administrative channels will have delayed rather than hastened the day of eventual adequate planning for the city. It is important to point out that the perquisite legal powers to execute even the most carefully devised plans for the metropolis are still conspicuously absent.

Traditionally, large cities have evolved as the aggregate product of thousands or even millions of individual decisions coordinated loosely, if at all, through the operations of what urban scientists term the "subconscious" processes of spatial distribution. We have seen, in our analysis of the present social-physical organization of Cairo, that these processes have been far from ineffective in giving shape and coherence to the structure of the city. Where the state wishes to intervene in these processes to guide developments in certain desired directions or discourage decisions which would undermine planning goals, it has two options that are, of course, not mutually exclusive. First, it can participate actively in development, engaging in direct investment, physical planning, and construction; and second, it can use its legal powers of incentives and sanctions to manipulate the terms within which decisions of individual investors and consumers are made. Different systems play different emphases upon these two techniques for guiding urban development. Although Cairo has apparently opted for heavy dependence upon the first, her planners have not ignored the second, even though the prerequisite legal powers have not been in being granted to the committee. Are these indirect legal controls to what extent are they at the disposal of responsible agents in the Governorate?

Among the minimum number of factors a modern municipality expects to have to control development are: building codes to set standards of safe and healthful construction; housing codes to control occupancy standards and minimum dwelling unit quality; zoning ordinances to assure conformity of land use to an overall plan for the city; subdivision regulations to control new developments to approved areas and to assure conformity of site plans to current standards of adequate site control powers over nonprivate developers (usually governmental agencies exempted from the other types of controlling ordinances); and perhaps also general planning laws permitting the acquisition and/or reservation of land required or anticipated to be employed for public purposes, such as schools, recreational facilities, the circulation system, utility installations, etc.

In American cities the existence of even the full roster of such controls on the development process has often failed to give assurance of effectiveness. First, most of these laws apply only to new construction or changed uses, not to existing structures or uses established before passage of the ordinance. Second, inspection and enforcement powers are often so weak as to make the laws largely paper. Third, with the loss of site control over buildings, the more basic laws cannot be employed to control the activities that have already occurred. The laws are, therefore, often inadequate and fail to do what they were intended to do.

In the light of the above, it would seem to be essential that planning agencies have the power to act not only after the fact but also in anticipation of future developments. In other words, the planning agencies should have the power to regulate and control the development of the city. This power should be exercised in cooperation with existing agencies to ensure that all developments are carried out in the best interests of the city. The planning agencies should have the power to control the use of land, to regulate the height, size, and location of buildings, and to ensure that the development of the city is carried out in a manner that is consistent with the overall plan for the city.

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in the absence of such overall regulations, the advisory powers vested in the Planning Department of the Governing House increased significantly as certain ministers protest to prevent serious misjudgments which will interfere with effective planning at a later date. The site-control powers of the Planning Department, however, are not institutionalized. By convention, and though not necessarily by law, the Planning Department has taken over the responsibility for approving all sites selected for planned use, including those selected for development by various government agencies. In the case of conflict, the matter is referred to the Cairo Council. According to its director, the Planning Department has been successful in about 60 percent of the conflict cases in obtaining the backing of the Council for its decisions and recommendations. However, the lack of any official powers and, consequently, the absence of any real sanctions that can be applied against offenders has inevitably invited numerous violations. Chiefly, these violations have been in the form of commencing construction before and without seeking to obtain clearance of the site for intended use. On the periphery, private developers and the Ministry of Industry have been the prime offenders; nearer to the center of the city, the Ministry of Tourism has been the main party in con- structing numerous hotels and other accommodations to encourage the tourist industry, has frequently failed to coordinate the work of the Planning Department about its intended constructions.

Before these weak legal powers can be strengthened, however, the goals toward which they are to be directed must be specified more clearly and receive official approval—a prerequisite still lacking in Cairo. It is true that in 1955 the Municipality commissioned a group of engineers and planners to formulate a master plan for the capital, and numerous committees were set up to handle specific aspects. Surveys were undertaken to accumulate needed data on the distribution of inhabitants, the location of industry, commerce, and other land uses, housing conditions, labor conditions, transportation and communication problems, streets and highways, etc. These data were used through field surveys throughout the city. These data were then transcribed by address on separate sheets which noted not only use but also other essential items. Organizing grids and codes were not used and no further processing (except a general map showing building conditions) was done. When I saw the sheet in 1959, they were dusty and beginning to deteriorate and were stored in a wooden cabinet far from the offices concerned with planning. An enormous amount of effort would be required to sort the sheets, to transcribe data for IIM analysis, and to prepare the land use map. By now, in addition to the year's worth of data, there is an additional third worth of data. Some of these sheets are already three years old, a period in which much may have happened in Cairo. The land use map is now being undertaken in cooperation with the work of the new Higher Planning Committee.
surveys required two years to complete. Finally, in 1956 the Master Plan for the city was finished and subse-
quently published. It was in fact not officially binding, nor does anyone claim that its contents offer a realistic set of goals for the city or a reasoned program for their achievement.

It may be that the Higher Planning Committee will succeed where the academic planners failed and that they will be able to assemble and process the required information and will be able to establish a mechanism for on-
going planning (rather than a static master plan con-
trolled by the date of its publication) that will be coupled with effective capital-budgeting both for long-range goals and short-term targets. Perhaps their recommendations will also include a diminution of the metropolitam region which could, by Presidential order, be made coextensive with the Cairo Governorate. And perhaps then it would be reasonable to hope for the legal powers that are so sorely needed to effectuate planning.

In the interim, however, some greater measure of con-
trol than now exists is necessary if the battle against un-
derdirected urban expansion is to be waged successfully. Whether this should be in the form of a general planning law on the English model, designating areas for urban expansion within a limiting greenbelt, both suitably zoned, as has been suggested by M. Hilfig "Ala," or simply by further strengthening the control powers of the Mubākhathah until the plans are ready and given official sanction, we cannot say. We can only point to the serious fact that, with the city growing at the rate it is, each de-
lay permits a hardening of patterns in the peripheral zones, i.e., in those areas which could benefit most from planning.

In the meantime, however, the government has become deeply committed to the path of direct investment and construction, not only in those areas where it has con-
tentionally operated—such as the construction of roads, bridges, universities, hospitals, and in the areas formerly left to private investment. In its direct activities the government has assisted by its rather extensive land holdings within the Governorate, in the form of state estates, mubākhathah lands and awāqf land over which it recently gained control, which have pro-
vided not only sites for construction but sources of rev-
ue to finance further projects. The most important of these direct governmental projects is in the field of housing, which, since 1956, has become an important function of the Governorate in cooperation with the Min-
istry of Housing. These projects have helped to fill a vacuum of private investment which has generally filled the field of urban real estate.

We have already noted how Cairo entered the most recent decades of her history severely crippled by a serious housing shortage which required occupancy densities far exceeding accepted standards of adequacy. During World War II, when there was a virtual moratorium on construc-
tion, overcrowding became endemic. In the immedi-
ate postwar period private investment in housing, while vigorously, was confined almost entirely to providing lux-
ury dwellings for that segment of the population already best accommodated in the city. Even when this modest activity decreased in the 1950's, the overall shortage of housing became more acute and direct government in-
vestment was finally thrown into the breach. The task, however, is enormous, and the efforts thus far, heroic as they may be, have been tardy in beginning and paltry in comparison to the expanding needs.

In a 1965 appraisal of the housing problem in Cairo it was estimated that by the target date of 1970, some 450,000 new dwelling units would be required. To cater for the population increase alone; about 500,000 dwelling units were required to reduce the existing levels of occu-
pancy density; furthermore, another 70,000 dwelling units were needed to replace deteriorated or to be demolished units.

We have already seen that the number of build-
ing permits issued annually for residential structures in Cairo has averaged no more than 1,700 in recent years. Even if all these structures were built and if the average number of dwelling units provided in the apartment buildings was 10, the additions to the housing stock would run no higher than about 15,000 dwelling units an-
nually. To what extent direct governmental efforts managed to bridge the widening gap between need and supply, can only be pointed to that before 1953 there was no housing policy in Cairo. The only publicly con-
strued housing project was Workers' City in Imbālah, with about 1,000 dwelling units. These had been rental units before the Revolution, when they were sold to their occupants.

One of the recommendations contained in the Master Plan was that a program of public housing be commenced. The first project to be executed under this new program was a relatively small, middle-income de-
velopment at Mawādā' al-Quršūn in Shubra, followed by more ambitious schemes to reclaim the khādir just below the aqueduct of al-Ghīrī, where the projects of Zaydūn and 'Ain al-Shirāz began in 1955-1956. Another major development in the north, al-Amīryāth, was also conceived at this early date, followed by two other minor projects, but there was as yet no coordinated program for the future.

The Ministry of Housing drew up its first five-year plan to cover the period 1960-1965, allocating targets and finances to the local units charged with plan execution. In this first plan, the country-wide allocations for housing were as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost in LE</th>
<th>Number of Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban housing</td>
<td>450,000</td>
<td>Estimated</td>
</tr>
<tr>
<td>Rural housing</td>
<td>500,000</td>
<td>Estimated</td>
</tr>
<tr>
<td>Middle-income</td>
<td>250,000</td>
<td>Estimated</td>
</tr>
<tr>
<td>Rural housing</td>
<td>500,000</td>
<td>Estimated</td>
</tr>
</tbody>
</table>

Cairo's share of this total allocation was quite high, amounting to some LE 11,000,000 of which LE 8,150,000 was specified for low-income housing and the remaining LE 2,950,000 for middle-income housing.

In line with this five-year plan, projects were rapidly undertaken by the Mubākhathah to expand the scope and scale of their housing activities. By the end of 1964, with only one more year of the plan to run, they had spent close to LE 6 million on the construction of some 14,533 low-income dwelling units and close to LE 900,000 on mid-income housing projects.

Small as these efforts were, they suggest that the average number of dwelling units provided in the apartment buildings was 10, the additions to the housing stock would run no higher than about 15,000 dwelling units an-
nually. To what extent direct governmental efforts were able to meet the shortage was beyond the capacity of the city to absorb without some problems to be solved except by the boundaries of any one governorate. 88

88See Muḥammad Hilfig, Fāḍil al-Hilī fī Mubākhathah al-Qahārah wa Imtānāt al-Manṭūrah (Contemporary Planning for the City of Cairo and in its Future Trends) (Cairo, Cairo, 1965).

89Department of Housing and Public Utilities, Governorate of Cairo, "Memorandum on Housing in the Governorate of Cairo" (mimeographed, in Arabic, undated but probably 1959), p. 1.

90All figures are approximate, and some discrepancies may be observed in comparisons. For example, the total number of housing units reported by the Department of Housing in 1964 was 43,142, while the official report of the Department of Housing and Public Utilities, entitled "The First Five-Year Plan," 1955-1960, pp. 59-63. (In Arabic.)

<table>
<thead>
<tr>
<th>Name of Project and Its Location</th>
<th>Total Appropriation in L.E.</th>
<th>Spent in 4 Years</th>
<th>Number of Built dwellings</th>
<th>Number of Dwelling Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburb (northwest)</td>
<td>348,734</td>
<td>93,949</td>
<td>4</td>
<td>264</td>
</tr>
<tr>
<td>land acquisition costs</td>
<td>(117,640)</td>
<td>(117,640)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>compensation to company</td>
<td>(40,063)</td>
<td>(40,063)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>public facilities</td>
<td>(1,650)</td>
<td>(1,650)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ma'arrif A (central)</td>
<td>354,815</td>
<td>209,239</td>
<td>3</td>
<td>275</td>
</tr>
<tr>
<td>Ma'arrif B (central)</td>
<td>658,994</td>
<td>51,204</td>
<td>none yet</td>
<td>none yet</td>
</tr>
<tr>
<td>Sayyida Housaya (east central)</td>
<td>97,718</td>
<td>32,480</td>
<td>48</td>
<td>plus offices</td>
</tr>
<tr>
<td>Bal al-Shar'iyah (east central)</td>
<td>195,000</td>
<td>6,605</td>
<td>134</td>
<td></td>
</tr>
<tr>
<td>Ma'dir al-Ummah (central)</td>
<td>51,291</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helwan (southern)</td>
<td>104,993</td>
<td>84,276</td>
<td>7</td>
<td>67</td>
</tr>
<tr>
<td>Tajjari Helwan (southern)</td>
<td>88,941</td>
<td>35,146</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Al-Masryal (Rashi')</td>
<td>276,278</td>
<td>132,945</td>
<td>3</td>
<td>181</td>
</tr>
<tr>
<td>Total Middle Income</td>
<td>2,454,124</td>
<td>893,160</td>
<td>25</td>
<td>1,040 plus offices</td>
</tr>
</tbody>
</table>

* This was originally undertaken under another program, hence the reductions for earlier expenditures.

* These figures appear in the same source, but the same of the entries in the table do not quite add up to the totals as reported. Either a typographical or transcription error in the original is possible.

155. Nasr City, first blocks of apartment cooperatives centered earlier. Particularly for the middle-income project in Ma'arrif,启动 on prime downtown land which had escaped renewal only because it had previously been encumbered by war, the competition has been stiff. Priorities have been established to accommodate persons displaced by clearance operations, even when their incomes exceed the limits established for eligibility. Waiting lists are long and, in the case of the Ma'arrif project at least, it was necessary to resort to a public lottery for initial selection of tenants from among the long list of eligibles. There is little doubt that these projects, extensive as they are, merely scratch the surface of the backlog of need and demand for housing in Cairo.

An even more ambitious program of direct government construction is envisaged during the second five-year plan for 1965-70. According to interviews granted by both the then-incumbent Minister of Housing and his Deputy Minister in July 1965, as reported in the press, certain policy changes have been made which place greater emphasis on rural housing and upon privately financed housing. In addition, more attention is to be paid to the possibility of repairing and renovating existing urban structures. These new plans will mean for Cairo is not yet clear, but officials in the city anticipate an expanded program that would provide up to 35,000 additional dwelling units within the five-year period, of which about 9,000 would be for low-income families. In addition to these housing projects that have been or are being planned, built, and managed by the government, there are many other housing developments which have been or will be planned, constructed, and initially financed by private housing authorities but then sold in the form of cooperatives to occupant-owners. This method is favored for several reasons. First, it has the advantage of making available the large amounts of capital required to construct coherent developments. Second, it maximizes, through direct design, controls over the location and standards of developments which otherwise would be relatively unenforced by legal restrictions, giving the in-adequacy of the laws regulating housing and land use. And finally, this method extricates the government from having its funds tied up indefinitely in projects it must continue to administer and maintain. Presumably, as co-operative loans are paid off or transferred to other investment sources, the funds would again be available for new projects. This approach offers attractive possibilities which are now being exploited. Many of the housing de-velopments on the west bank are being sponsored in this manner, as well as other more centrally located smaller projects for middle- and upper-middle-income groups.

By far the largest and most important of the government-sponsored projects is Nasr City, a centrally planned and executed (but eventually self-liquidating) development designed to provide not only housing but employ-

156. Nasr City, still under construction

Parallels not only to Heliosipolis, which faced similar technical problems, but to even earlier prototypes suggest themselves. Cairo has had a long tradition of “royal cities” founded to mark the inauguration of new dynasties, and myths and symbols have grown up around their founding. This appears to be no less the case for Nasr City. The fictions that Fuṣūṭh owed its site selection to the resting of a dove in General Amr’s tent, or that al-Qibīrah was rechristened to commemorate the ill-conceived tug of a crow, seem to be matched by the now ritualized sentimentality that the site of Nasr City was selected because it was in the very barracks of that zone that the Revolution of 1952 (whose secret watchword was nasr,
The Contemporary Metropolis

meaning "victory"), was conceived and successfully planned. Whatever the validity of this legend, it cannot be denied that Nasr City has captured the imagination and enthusiastic support of the present regime.

The new city is being built jointly by the Ministry of Housing and the Ministry of Defense, the latter involved because much of the site belonged initially to the army which has retained its interest in it and which, when the old barracks are cleared within the next few years, will have to build new replacements. Administratively, the arrangement is as follows. The Ministry of Housing has under its jurisdiction a Building Authority for Cairo which, in turn, is composed of five societies: (1) Nasr City; (2) Hel blueprint (3) al-Murid; (4) Ain Shams; and (5) Public Housing. Each of these societies is run by a board of directors. All plans made by the boards of these societies are submitted for approval to the Building Authority and in addition, in the case of major plans, may also have to be submitted directly to the Minister of Housing for his approval. The Chairman of the Board of Nasr City in 1965 was a talented and dedicated retired general of the army corps of engineers, M. 'Arakah, who was associated with the project since its inception.

Despite the seeming independence of the Nasr City Society from the formal government of the Cairo Governorate, the bonds are many and run deep. First, the original architect for the planned city, since replaced, was none other than the former chief of the Cairo Baabda, Muhammad Riyyid. In addition, the current head of the Department of Housing and Public Utilities in the Cairo Governorate is an officer in a member of the board of directors of each of the five separate building societies as well as a member of the Building Authority. It would be a rare action that could escape his cognizance and he is viewed as a valued partner in planning.

In addition to these personal links there are legal ones as well. The standards of construction and site design must conform to the minimum requirements established in the building code and subdivision regulations of the Governorate. According to General 'Arakah and to one of his chief architects, Kheriar Rajabi, the designs for Nasr City not only conform to these minimum standards but, in addition, are governed by even more stringent requirements as to land coverage limitations and setbacks, these being incorporated into deed restrictions running with the land. Furthermore, the Department of Housing and Public Utilities has been called upon to give technical assistance in the design of the community, particularly in coordinating the planned streets with those of the Mubaldyaf. This was essential, since the Governorate is financially responsible for half of the expense of constructing major thoroughfares through the city and is expected eventually to accept title to all public ways.

The final relationship between the Nasr City Society and the Governorate lies in the ultimate disposition of the project. The Society has tried to minimize its permanent involvement in the community, conceiving of its role as builder and then disposing of the project. To this end, land in most of the subareas is being marketed outright to private buyers and cooperative developers who will construct single-family dwellings and apartment houses using independent financial resources but conforming to the deed restrictions established by the Society.

The only direct construction undertaken by the Society has been the modest administration building and the blocks of eleven-story apartment buildings on a small off-center plot which the Society has been marketing to tenants on a cooperatively owned and managed basis. It intends to liquidate its investments in streets and street trees as soon as possible by getting the Mubaldyaf to accept the deeds and assume responsibility for maintenance. Large centrally located plots in each of the residential neighborhood units are being deeded directly to the Ministry of Education so that the latter can construct the necessary schools. General 'Arakah anticipated that within twenty years the Society would be able to turn over the completed community to the Governorate, thus freeing itself to undertake new projects.

These are the long-term prospects for the city; the medium plans are somewhat more modest. The Society is now concerned with only the first phase of the development plan covering an area of some 7,500 acres. A fairly detailed site plan has been drawn up and approved for this nucleus which enjoys the most favorable location, being closest to access highways and existing mass transit routes and having the most hospitable terrain. Rights to the remaining 14,000 acres had not yet been granted as of 1965 and plans for them remain in the visionary stage. Map XVIII shows a rough sketch plan for the 7,500 acres currently being developed.

As we have seen, in the absence of overall zoning regulations for the city, deed restrictions have been the indispensable technique for the exploitation of the summer of 1965, when construction for this has been examined. little concern for the structures or the manner of their development. Information on present and planned uses came from observations and interviews, as well as additional maps on display in the office of the architect for the project.

The site is subdivided into three general zones which correspond roughly to three major categories of use. The most imposing portion of the city (northwest) contains a concentration of institutional and official users—a true "royal city." The stadium (reminiscent of a hippodrome) forms its core and constitutes, at present, its outermost perimeter from several sources, none of which is without flaw and all of which may subsequently have been altered. A photographic reproduction of what appears to be a three-dimensional model of the original plan was included in an advertising brochure issued quite early by the Building Society. In addition, I was given a blue-line reproduction of the general site plan being used in the architect's office of the Society, showing major roads but no land uses. This plan covered a more extensive area than had been included in the advertising brochure. From these two "blue maps," and on the assumption that the latter was probably more accurate and up-to-date than the former, the major contours for the map were sketched. Information on present and planned uses came from observations and interviews, as well as additional maps on display in the office of the architect for the project.
The contemporary metropolis

streets, utilities, street lights, mailboxes), and its single-family detached houses, which in Egypt are always called "villas," were also built up by a few higher ranking government officials. In addition, there were several other inhabited blocks containing semi-detached but low apartment buildings, each one accommodating from four to eight families. These clusters were pleasantly landscaped with grass, flowers, and small trees, and they presented a pleasantly contrasting with the dusty expanses of surrounding desert. Nearby was a school building, a mosque under construction, and a small cluster of units obviously intended for commercial use, although only the government-run cooperative grocery store appeared to be functioning. One can only assume that at the time of this writing all these zones are fully inhabited. The second major portion of the site, roughly to the south and west of the above, is devoted chiefly to industrial, institutional, and recreational uses. At the southern extremity lies the intraversable terrain of the "Red Mountain" (al-Habib al-Ahmar), an irregularly steep desert escarpment, broken by outcroppings of red sandstone boulders and chunks of marbled petrified wood, which rises to an elevation overlooking not only Nasr City to the north and east but the ancient capital of Cairo as well. Due south one sees--two miles away--the companion peak of the Muskatam and Muhammad 'Ali's citadel-monocle atop it, and in the flat intervening plain the exposed lines of the rail tracks leading to Nasr City. It should be noted that a casino-rest house is being built as a focus for a recreational zone; the surrounding hills are being terraced, irrigated, and planted with trees and groundcover.

The Red Mountain, however, has not hitherto been a place of recreation. Its chief value, rather, has been as a rich source of marble, sand, gravel, and other raw material for brick and concrete. Thus, in the industrial zone at its base are factories engaged in extracting and processing these materials. These are to remain and to be supplemented by other, hopefully less dust-raising, industries. On the foothills beyond is a large district being developed into an extensive campus for al-Azhar University. Some of these buildings were already being constructed as early as 1956 and the plans envisage a complex of classrooms, laboratory, and dormitory structures to house the "secular" branches of the university (the Colleges of Arts and Sciences); the University's basic scouting schools will remain behind in the medieval city. The al-Azhar site is broken into at one corner by some very rocky irregular terrain. This area cannot be developed for anything except widely spaced villas and will require enormous investments in reforestation and groundcover. Each property owner has been tentatively marked off as the site for a single-family home and the minimum building plot has been set at one acre. It is hoped that this zone will be developed into a prestigious "garden city" for government officials of the highest rank.

The major use intended for the final third of the site is residential. As can be seen from the sketch map, there are very extensive low-density "villa" communities, accommodating between 40,000 and 75,000 inhabitants each, planned for this most peripheral portion, to be buffered from the industrial and institutional uses by multi-family housing for lower-income groups. By the summer of 1965, only the first community area had begun to receive site improvements, and lots had been platted and were being sold to private builders. At that time it was anticipated that all utilities and other improvements would be completed within two years and that the area would then be ready for development and occupancy. Thus far, Nasr City shows great promise. The amount of government backing available has enabled it to progress in a manner not matched by privately undertaken schemes. (Plans for a new town on the Muskatam to the southeast of the existing city, which were devised at about the same time as those for Nasr City, have made far less progress, partly because government played a smaller role, partly because the zone abuts low-income areas rather than the more desirable residential quarters of Heliospolis.) The source of its strength, however, may well prove a double-edged sword. Thus far, government agencies have been able to exercise a certain control over Nasr City. On the other hand, with the many industries and ministries that have built their offices, the Ministry of Industry has invested in some of the new factories, housing for bureaucrats has been built by the respective ministries; and the cooperative apartment buildings originally intended for private construction, finally had to be built by the Nasr City Society itself. Public investment, thus far, has therefore been the sine qua non of the new town. Its success, however, is not only the result of the unique originality of Masratil's when the main lines for the modern Western communities of Ismailiyah, Azbakiyyah, and 'Abdalllah were laid out in great hopes that private builders would immediately materialize. Demand, however, came only later, and for many years the new quarters remained empty and relatively empty. Will this also be true of Nasr City? Certainly, the need for community development and additional housing is acute in Cairo today, but can capital be made available to private investors at a rate and under terms attractive enough to translate that need into effective economic demand? Public policy has favored direct public planning. Now the problem is: how can the public sector turn back to the private sector the responsibility for executing these plans according to schedule?

Cities develop and expand not only in response to effects and the incentive conditions of master plans but also in response to conditions perhaps inadvertently created by many other decisions whose latent effects may be even greater than their manifest goals. Decisions concerning industrial location and transportation patterns may therefore shape the lines of the future city as much as, if not more than, the direct planning and construction of housing projects and even new towns. Cities point to the necessity at both the southern and northern extremities of the metropolitan region will inevitably elongate the shape of Cairo, despite the attempts of her planners to encourage lateral expansion into the deserts. Even the ring roads designed to bypass the congested center of the city and to stimulate development at the eastern periphery, or the new bridges which will give added impetus to urbanization on the west bank, cannot hope to counteract the strong impulses toward a linear city dictated not only by terrain but by industrial location decisions. If and when the projected subway is built to connect the Bib al-Hadid railroad station north of the central business district with the terminus of the southern railway at Bib al-Louq south of the CDB, this cannot help but further contribute to the tendency to expand north and south, rather than east and west.

The forces pointing to this inevitability have been operating since the very founding of Cairo and we have traced this process throughout the entire history of the city. While the nature of these forces has perhaps altered with the changing technology and shifting attitudes of political control, they have been neither eliminated nor reversed. In fact, as construction continues on an ever greater scale, the magnetics of distant cities both north and south gather renewed strength and the mass of Alexandrians some 200 kilometers away pulls urban development in its direction and, as we have suggested elsewhere, should Cairo eventually develop its own "megapolitan," the strip between Cairo and Alexandria as well as of the two most important cities of Egypt. To work against this trend may be futile; to work with it the better part of wisdom. The satellite cities that have been so ardently advocated by Cairo's physical planners may offer a means for relieving some of the population pressure on Cairo while still foreclosing the economic causes of decline and urban blight. The strip between Cairo and Alexandria already served by highway, rail, and water connections, as well as

WHETHER THE CITY: A PROGNOSIS

as a strong electricity grid. Satellite communities strung out along the highway could be developed as a solution to the realities of terrain and the problems of decongestion for the city than the solution that has been advanced to date, namely, ringing Cairo with satellites in circles.

The social life of tomorrow's Cairo are as important as her physical ones, but here both the forces and their results are somewhat less tangible. There can be little doubt that the trend toward the reorganization of society, already observable, will continue to blend the disparate cultural and technological worlds into which Cairo, for at least the past one hundred years, has been subdivided. But as this social homogenization occurs, there will be increased economic differentiation within the unified framework of industrial urbanism. Classes may well take up the place of ethnic, religious, and birthplace communities in regulating the distribution of population in the city, but they cannot substitute for the moral and social solidarity which the former units often provided in the lives of Cairo's inhabitants.

Some 650 years ago, the basic sociological dilemma was formulated by Ibn Khaldun, and the issue it raised would now appear to have even greater applicability to the world of Cairo than they had in his day. He contrasted the moral strength and vitality of social units bound together by "filial" or "loved," to group solidarity which is the survival of each member was inextricably bound to the survival of the unit (with) the effect, individualism hedonism and passive bonds of larger more complex communities. While, literally, his comparison was between the tribal solidarity of the hajiya and the decadence of the urbanity of the medieval Arab world, we have already seen that even the latter units were nowhere as devoid of spirit or group solidarity as the form of urbanism now emerging in the modern world. What will the new organizing principles of Cairo's social life be and how will they shape the future face of the metropolis? As the smaller identities of "individual and family," on the one hand, and the larger identities of "Cairene and Egyptian," on the other, struggle to compete with the middle-level identities of trade, quarter and religious sect or brotherhood, life paths shall proliferate and intertwine for many subgroups in the city which have traditionally traveled in circular streams. These new paths will mold the evolving city into a more complexly integrated organism-but its exact nature remains shrouded from our limited human vision. Perhaps this book must end appropriately on the same note that concludes all traditional Islamic endeavors to understand the ununderstandable.

< And God Knows Best >
of dress, and leisure time activities which were once the prerogative of a somewhat Westernized middle class have been diffusing down the social structure. One rarely sees the thalâbbah, even in the most traditional quarters of the city, and many persons alternate with ease between Western and traditional dress (wearing trousers to work and putting on the thalâbbah only if required by the service character of their employment). Almost no women are veiled, and if one sees some black-gowned women, in most cases these turn out to be village women in for Friday shopping. Sharp social lines between the old and new cities are being rapidly erased and population flows move freely between the quarters. Downtown shops which formerly specialized in foreign goods now carry locally produced goods little differentiated from the lines handled elsewhere in the city. Rarely now does one see the pretentiously overgrown; but rarely too does one see really destitute persons.

The overall appearance of the city reflects some of this social homogenization. The newer quarters of Cairo are somewhat shabbier than they were some ten years ago. They are also far more crowded, since all now dare to treat where once only the wealthier classes isolated themselves. The older quarters, however, are less depressed than they were some years ago, for public housing projects, slum clearance, and more equitable income distribution have been making their influences felt. Trades which formerly catered to a Western or Westernized clientele, such as furniture makers, now seem to do a thriving business among the indigenous working class of the city. Whereas fifteen years ago one was struck with the rural qualities of the city, today one is impressed with the urbanity of large quarters in Cairo. It is as if, in that insti-

A PERSONAL POSTSCRIPT

The summer of 1962 I made a "final" field trip to Cairo to gather information for the most contemporary period. By the end of May 1967, these additions and revisions had been incorporated into the manuscript. The concluding lines of the final chapter were typed and the manuscript mailed to the publisher. Although it was evident that there could never be a logical termination point for a biography of a living city, it appeared that the future of Cairo, at least for the next few decades, was clearly charted. National goals had been established and Egypt was making rapid progress in her social revolution. The problems facing the city were more extensions of those already apparent and recognized, and were, furthermore, receiving concerted attention from a large and competent cadre of professionally trained and sophisticated Egyptian planners. It was, therefore, with a somewhat sanguine sigh of relief that I closed both the book and, so I thought, a chapter of my life.

Within only two weeks, however, war had again broken out in the Middle East. The future of Cairo was suddenly obscured; there were even reports that the city was being bombed. It seemed that not only Cairo's but Egypt's fortune lay in the balance. These events set in motion changes that were far less predictable than the problems that had perplexed me in the final chapter. One year later, when shock had subsided, I returned to the manuscript, wondering whether or in what way it should be revised. Rather than attempt the impossible, I decided not to revise the book itself but rather to add a few brief notes concerning the impact of the present crisis upon Cairo. Return visits to the city during the summers of 1968 and 1969 were both reassuring and distressing. Reassurance lay in the fact that the supreme vitality of Cairo had again triumphed over adversity. Distress, however, lay in the fact that the still-smoldering war had imposed doubled difficulties upon the city.

One of the most important effects of the war and of continued hostility along the Suez Canal has been a marked increase in the population of Cairo. Between half a million and a million Egyptians have been evacuated from the war zone, and although some have been relocated in other urban centers in areas of land reclamation, many of them are now settled in Cairo. Public housing projects constructed initially for low-income Cairenes are being used to house some of the evacuees. Others have settled in the fringe cemetery cities where makeshift housing has supplemented public facilities. In every quarter of the city, however, is evidence
Appendix A: A Methodological Note

The variables selected for the original analysis of the Census of 1957 were initially grouped under four headings which were considered related to the social dimensions suggested by the social area analysis, but no attempt was made to replicate the exact measurements employed by Shevky and Bell. My efforts, rather, were directed toward developing measures that would be sensitive indicators of the unique social conditions of Cairo. Furthermore, my limited data precluded certain of the standard measures, as will be explained below. The major headings under which variables were grouped were demographic characteristics, family characteristics, socio-economic status characteristics, and ethnic identity. The final three categories were consciously predicated on the assumptions of social area analysis, although their ultimate combination was not attempted until the empirical interrelationships had been thoroughly investigated.

To summarize the demographic structure of each census tract, population pyramids were constructed from the age and sex distributions. Density of development was measured by computing the ratio of residents per square kilometer. In addition, because Cairo had experienced rapid growth resulting from rural-to-urban migration, it was felt that differences in the sex ratio might be found that would distinguish areas differentially affected by in-migration. Therefore, two final demographic measures, a general sex ratio and a sex ratio specific for the migration-prone ages between 15 and 50, were also computed.

To summarize the nature of family life in various quarters of the city, other indices were devised. Among these were the average size of family and the standard fertility ratio. In addition, it was believed that some measure of marital status would be useful in describing the nature of family life, since significant cultural differences exist within the city that determine such matters as usual age at marriage and prevalence of divorce. To reflect these differences the percentage of females sixteen years of age and older who were listed as never married was computed and a similar rate of never-married males was derived.

These rates were presumed to measure somewhat different phenomena, justifying the inclusion of both. For females, eventual entrance into at least one marital union is virtually universal in Egypt. Therefore, the percentage of females in a census tract who have reached the age of sixteen or over but are still listed as “never married” represents in reality the proportion of women not yet married. Since this proportion decreases rapidly with age, the measure may be taken as an indicator of the “usual age of marriage” for females in a census tract. Given a normal age distribution, tracts having high percentages of never-married females contain populations in which females typically marry at older ages; conversely, those with low percentages of never-married females contain populations characterized by very early marriages.

The male rate, on the other hand, appears to be more completely determined, being affected not only by the typical age at marriage but even more by the selective migration of single males. Transients, migrants who plan to return to their villages, and young, career-oriented males establishing residences apart from their families of origin tend to gravitate to sections of the city which provide housing and services suited to their special requirements. Their concentration in turn gives to certain census tracts high rates of “never-married” men, just as their selective out-migration from rural areas gives these areas typically low rates. There is absolutely no evidence that a similar selective process operates for females in Cairo, since the culture effectively burs single females from migrating singly and from living alone.

In the original study two additional indicators of marital status were computed, although these were later dropped and another measure substituted. These were the percentage of widowed and divorced men and a similar rate computed for women. Neither of these measures proved particularly sensitive. The male rate, for example, was found to be relatively constant throughout the city (in the neighborhood of 5 percent), a fact explainable by the ease with which widowed and divorced men remarry and by the nature of the census data which presented current marital status only. It was later omitted on the grounds of lack of discrimination. The female rate, on the other hand, did vary from one part of the city to another and was usually high enough (in the neighborhood of 20 percent) to discriminate. However, because it combined phenomena of very different meaning, I believed it could not be justified on conceptual grounds. Widowhood and the divorced state are perceived very differently and the attendant social condition of the indi-

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1 At the time (ca. 1955) I was deeply affected by the seminal study of Elid Shevky and Wendell Bell, Social Area Analysis: Theory, Illustrative Application and Computational Procedures, Stanford University Series in Sociology, No. 1 (Stanford University Press, Stanford 1955).

2 The fertility ratio used differed slightly from that usually employed in American demography. It was the number of children under five years of age per thousand women 15-49. As will be seen, the age range of fecund females has been expanded, a decision justified by the actual behavior of Egyptian women. Childbearing begins earlier (the median age at marriage is 16, and the legal minimum is 16 is not always honored) and is sustained later in life.
ming is therefore significantly affected. Young women tend to remarry, whereas widows are therefore primarily older; on the other hand, women who never married are generally younger, unlikely to remarry, and poorly sustained by culturally approved support. The social stigma of divorce (and it should be borne in mind here that urban Egypt has a divorce rate that exceeds that of the United States and is one of the highest in the world) coupled with the financial deprivations that beset a divorced woman in a culture which provides few gainful legitimate ways of earning a living for ill-educated women, mean that divorced women represent a significant departure from traditional family life. Therefore decided to eliminate the general measure which combined widows and divorced and to substitute, in later analyses, a new measure based on the ratio of currently divorced women per 100 ever-married women.

Shekhy had utilized, in addition to the fertility ratio, two other indicators of "urbanization" or "familism": the percentage of single-family dwellings, and the rate of female participation in the labor force. Neither of these indices was relevant to the Cairo case and no attempt was made to include them. For one thing, data on house types are not available in the Egyptian census. Furthermore, multiple-famly flats predominate in Cairo. Single-family dwellings remain rare. A few are scattered in upper-income districts, but even they have been converted to institutional uses. At the periphery, they are found chiefly in Ma'adi and, most recently, in newer developments at the outskirts of Heliospolis and on the Suez Canal. However, they are not easy to find in the poorest quarters of the periphery as well, inhabited by farmers in the agricultural fringe and by tomb custodians and squatters in the Cities of the Dead. House types, therefore, can only be found in those areas which were traditionally inhabited by farmers and by tomb custodians, and which later became urbanized in a process of urbanization which suggests the development of a new line with Western developments.

Female participation in the labor force is the final indicator of familism, is equally irrelevant thus far in Egypt. Few women work and those who do are drawn from both extremes of the social scale. According to a sample labor force study conducted by the Egyptian government in 1957, only 5 percent of all females over five years of age were employed in urban (nonagricultural) occupations, and except for a small number of professional and sales women, most were engaged in domestic service. This difficulty was compounded by the fact, already noted, that an anomalous classification system which effectively prevented the computation of any meaningful labor force figures for females was in operation. The use of "ever-married women" as the denominator represents my attempt to free the measure from contamination from the number of marital status, namely, the proportion of adult females not yet married.

A METHODOLOGICAL NOTE

The use of education as an index to status, however, is not without substantial justification, especially in the case of an newly industrializing country such as Egypt. Earlier research undertaken on the nature of Egyptian urbanization, in which I had attempted to devise a scale of "urbanity" for Egyptian towns on the basis of demographic and urban characteristics, had led me to the firm conviction that the single best index to way of life, values and modernism and social class position of subgroups in Egypt was the female literacy rate. No other variable appeared to occupy so pivotal a position in social differentiation. First, female literacy is associated with higher income, since only professionals in comfortable circumstances can afford to send girls from their farm or domestic duties (often by hiring a substitute, a young servant girl); only they can afford what appears to the outsider to be the "normal" costs of books, clothing, and other materials required for school attendance. However, within the economic groups financially able to send girls to school, the decisive variable is value orientation. Along with a decision to educate females go many related cultural values, each of which implies a partial break, with tradition and a preference for modernization. These in turn are significantly related to basic changes and in Egyptian social structure.

On the basis of this reasoning, then, a literacy index (constructed by computing the percentage of females five years of age or older in a census tract who could and did write, as was placed under the rough heading, socio-economic status) was constructed. The index was also constructed. It seemed highly desirable to separate the two rates, not only because they were significantly different (male rates were generally three times higher than female rates) but also because, even the size of the differential might reveal something about the double standard it implied. Whereas the female literacy rate can be viewed as an index of "literate leisure," no such interpretation should be given to the male rate which I believe represents real differential power in the labor market.

My justification for selecting literacy rather than a more complex measure of educational attainment was a rather simpler one. Egypt, Present State and Past, the city, varying from a low of about 3 percent for females to certain agricultural fringe areas to a high of almost 90 percent for males in the highest status, most "Westernized" Gold
Appendix

Coast of the central city along the Nile. Had some higher educational level been selected, the result would have been to reduce the rates in a majority of census tracts to near zero, and the numbers (particularly for females) would have been so small that meaningful rates could not have been computed, given the large number of unknowns and the relative unreliability of data on educational levels.

Change, particularly in the realm of education, has been taking place very rapidly in Egypt in recent decades, and each successive census has documented an impressive rise in literacy. Because of this, it was felt that the literacy rate based on almost exact tabulation of the population, not merely by a sample, would give truer results. Finally, the census data were also included under the general heading of socio-economic status: the handicapped (rate of number of persons with reported mental or physical disability per 1,000 population) 17 the rate of male unemployment 18 It was hoped that these measures would provide some socio-economic and demographically depressed sections of the city and those sections to which a dependent population had gravitated.

The final category of ethnic identity included two variables which, while closely related, were distinctly different. In the first place, the percentage of Muslims residing in each census tract; the second was the percentage of non-Egyptian nationals in each tract. In order to demonstrate why both measures were considered necessary, I must digress somewhat to describe some of the basic communal cleavages in Cairo society.

In 1957 some 83 percent of the city's residents were Muslims, a lower proportion than was to be found in the country as a whole. Of the remainder, the largest majority were Egyptian Copts, adherents to a monophysite Christian sect who had resisted conversion to Islam. In addition, Cairo in 1947 still contained a fairly sizable Jewish community, concentrated within three census tracts in the oldest parts of the city. Another small minority consisted of Protestant, Greek Orthodox, and Maronite Christians, largely resident in the poorer districts who held themselves aloof from other Christian sects.

17 It was realized in advance that the 1947 Census had recorded institutionalized population by place of institution, rather than permanent residence. Therefore, I was aware that several large hospitals in the Cairo metropolitan area would cause distortions in the rates for their census tracts. However, it was also believed that these rates would be so markedly higher than the norm that they could be easily identified. This proved to be correct. In later censuses involving correlation coefficients between the handicapped rate and other variables, the three census tracts containing the major mental and two large general hospitals were excluded. When I could not have anticipated was that the procedure for dealing with the institutionalized population would be changed for the 1960 Census, a fact which reduced the value of replicating the 1947 analysis. City.

18 This was computed using the "no employment" category of 1957, which at the beginning I believed measured unemployment. It was gradually realized that only partially employed or strictly employed, i.e., persons actively seeking employment. The remainder were classified as "unemployed" because their unemployment was established behind some imputation profession as why withdrawn from the labor market, while they constituted a dependent population, they were not included in an economic's rate of unemployment. I therefore retained the category but interpreted it more directly as an indicator of economic dependency and marginality to the productive system. Again, some loss in comparability occurred where the 1952 Census defined unemployment in terms of unemploy- ment in the latter documents, the unemployed were distinguished from the unemployed and the marginal employees, so that the estimates of the latter year were substantially lower than those for the former.

Finally, there were the foreign nationals—chiefly Greek and Italian but containing representatives of almost every nationality in the world—practically all of whom (except the Sudanese and the Turks) were non-Muslims. Thus, the identity between Egyptian and Muslim, while close, was not exact.

In 1947 the number of foreign nationals residing in Cairo constituted only 3 percent of the total, representing a substantial reduction from previous censuses. Despite their small numbers, however, they exercised power disproportionate to their size. Furthermore, because of their tendency to concentrate within certain small areas of the city, they affected the ecological pattern of the city out of proportion to their numbers. It. Therefore, seemed desirable to distinguish between those subareas that were non-Muslim by virtue of the presence of foreigners and those non-Muslim areas containing Copts, Jews, and other indigenes as well. Religion and nationality, then, were included.

Thus, in my initial study undertaken in 1956, some 19 statistical analysis methods were employed to summarize as far as I was able to determine the differences between the populations residing in the 216 census tracts of Cairo. Conceptually, these variables were grouped into four general types—demographic, family, socio-economic status, and ethnic dimensions—but no attempt was made to construct composite distribution maps were prepared for most of the variables from which the general ecological outlines of the city began to emerge. Some of the distribution maps were remarkably similar in shape, while others deviated considerably. While these visual impressions the idea occurred that there might be some way to construct composite maps; however, no methodology for doing so had yet been presented. It was at that time that the logical constructs of social area analysis could not be justified. Only in 1956 was it determined that factor analysis was a reasonable way to arrive at a coherent synthesis. Before this could be done, it was necessary to obtain comparable boundaries of the census tracts in each year and the city boundaries which had, in the meantime, been altered. In brief, the following corrections were made: (1) a 1970 census tract boundary contained two 1947 census tracts; (2) a few tracts in 1947 were reclassified and a new set of indices computed; (2) when a 1947 census tract had been subdivided into more than one tract in 1960, the data from 1960 were combined and a single set of indices computed; (3) certain tracts, where comparability was in doubt, were eliminated from the analysis; and (4) all tracts in 1960 beyond the 1947 boundaries of the city were eliminated and all tracts added to other districts in 1970 which had fallen within the city limits in 1947 were added. These operations resulted in a final total of 264 reproduced and exactly comparable census tracts retained for the study. Map XIX below shows the location of these replicated tracts.

The methodology of the indices remained the most difficult task. No one who has worked with serial census data needs to be reminded of the sad fact that the census exists for purposes other than the convenience of the researcher. Nor indeed can consistency from one census to the next be demanded when this would dictate data presentation at an unimproved level. Nevertheless, changes in definitions, methods of presentation, classification systems, and the like must all be taken into consideration in research involving more than one census date. Sometimes compromises are possible, in other cases measures must be dropped, and in still other cases the researcher can only hope that the inevitable distortions will not be great enough to invalidate his conclusions. All three techniques were necessary in this study. Table A-1 summarizes the variables initially computed and identifies whether they could be replicated in 1960, given the data in that census. Changes in definition and other caveats are presented as notes to the table.

Three indices of availability of data were inevitable to a truncation of the list of usable variables. A final set of only thirteen variables (see Table A-2) was used in the factor analysis that followed.

Table A-1: Statistical Indices Possible for Cairo in 1947 and 1960

<table>
<thead>
<tr>
<th>Index</th>
<th>Available in 1947</th>
<th>Available in 1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average persons/1000</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Average persons/family</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Density (persons/m. km.)</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Sex ratio, all ages</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Sex ratio, 15-49 only</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Sex ratio, 50+</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent females never married</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent males never married</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent ever-married</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent ever-married females divorced</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Handicapped persons/1000 population</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Male unemployment</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent gainfully employed</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent females literate</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent males literate</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent males 5-24 in school</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Percent females 5-20 in school</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Percent Muslims</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Percent foreign nationals</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Population pyramid</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>
APPENDIX

NOTES TO TABLE A.1

1 This variable was dropped because of a change in census procedures concerning the tabulating of institutionalized population. In 1947, institutionalized population was reported by province in census; in 1960, it was reported for each home address. Therefore, computations of persons per family varied widely. Short of recomputing an entirely new rate which would have excluded the "single person families" in both years, it seemed better to drop the index which, in any case, had not proved particularly valuable.

2 The densities for 1960 had to be computed using area measurements that apparently only the census team could have obtained. These were adjusted in gross fashion when tracts were combined or grouped. However, those cases where boundary changes were slight or negligible would still be included, some of my density figures for 1960 undoubtedly contain errors of this magnitude.

3 Between 1947 and 1960, Egypt experienced a radical drop in the infant mortality rate, the Cairo rate actually being halved. Therefore, there has been a major shift upward in the general fertility ratio which is quite sensitive to changes in the rate of infant survival. Despite this trend, I retained the fertility measure in this study, since it was used to determine relative positions of census tracts within the ecological structure rather than as an absolute measure.

4 In the Census of 1947, the base population for which marital status data were presented was the population sixteen years of age and older. Therefore, all the 1947 rates concerning marital status were based on this. In the Census of 1960, the population covered in the table on marital status included all those fifteen years of age and older. My 1960 rates, therefore, diverge slightly from those computed for 1947, but the difference again appears to be minimal. The net result, certainly, would be to increase slightly the percentage of never-marrieds. The change in definition would not be likely to affect the divorced-women measure, since the latter is "ever-married women."

5 See note 1 concerning changed treatment of institutionalized persons.

6 In 1947 the base used for presenting occupational data was the total population five years of age and older. In 1960, this base was revised to six years of age and older. Apart from a slight but constant change in the base, this appears to be a serious contraindication to its retention. The change in definition of "unemployed" means serious difficulty, and the results were not as successful as I had hoped.

7 This rate could not be computed in 1947 because of the listing of housewives as 'employed in domestic service.'

8 As an experiment I computed this rate in 1960. What I found was that it worked quite well with high socio-economic status. Employed women were either educated themselves or were domestic servants allotted room and board as part of their compensation. When the correlation coefficients between this variable and all other measures were computed, I discovered that these almost identical coefficients obtained when the 1947 variable of females in school was correlated with the remaining variables. When the two variables appear superficially different, they evidently reflect a common (but unmeasured) effect: to be decided to use females in school in the 1947 analysis and substitute females in paid employment in the 1960 analysis. No measure of school enrollment could be computed for 1960 due to the absence of data.

9 There was a rather drastic change in the age group for which literacy was reported. In 1947, literacy status had been given for all persons ten years of age and older. In 1960, this information was given only for the population fifteen years of age and older. This was the largest shift in base population in the census, I made a number of independent investigations to determine to what extent the rates are changed for various subcategories of population by a change in population age base. The male rate ratio appears to remain almost constant, dropping only slightly when the population between five and fifteen is omitted. The female rate, on the other hand, tends to decrease rapidly as the minimum age of the population base rises, reflecting the many decades during which females were neglected in the educational system. Although direct evidence is lacking, it is reasonable to assume that the population in the middle ranges of stratification is most affected by a change in the age base when the literacy rate is computed, for it was this group which neglected the education of the older generation of women but has taken enthusiastically to the schooling of its younger generation. Eliminating the effects of this recent interest and concern leads to an underregistration of the literacy level in all groups, but particularly in the middle group, i.e., the group undergoing the most marked transition. I therefore place a caveat before the use of the two differently defined literacy rates, but believe again that my use of the measure, to assign relative ranks only, removes some of the more glaring defects of noncomparability.

10 It will be recalled that this was merely an approximation and should be treated with care.

TABLE A.2 - STATISTICAL INDICES ACTUALLY USED FOR CAIRO IN 1947 AND 1960

<table>
<thead>
<tr>
<th>Index</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demographic</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>The population pyramid, while useful for identifying identifiable traits, could not be used for correlational analysis.</td>
</tr>
<tr>
<td>2. Set ratio, 15-49</td>
<td>The general set ratio was dropped to avoid the limit of this age-specific ratio which proved most sensitive.</td>
</tr>
<tr>
<td>Family Characteristics</td>
<td></td>
</tr>
<tr>
<td>4. Percent females never married</td>
<td>Replaced two earlier measures.</td>
</tr>
<tr>
<td>5. Percent males never married</td>
<td></td>
</tr>
<tr>
<td>6. Percent ever-married</td>
<td></td>
</tr>
<tr>
<td>Socio-economic Status</td>
<td></td>
</tr>
<tr>
<td>7. Percent room ratio</td>
<td></td>
</tr>
<tr>
<td>8. Percent female literate</td>
<td></td>
</tr>
<tr>
<td>9. Percent male literate</td>
<td></td>
</tr>
<tr>
<td>Ethnic Identity</td>
<td></td>
</tr>
<tr>
<td>13. Percent Muslims in tract</td>
<td></td>
</tr>
</tbody>
</table>

The loss of the important variable of foreigners could not be helped, since this cross-tabulation was omitted from the 1960 returns.

Peornonian product moment correlation coefficients (zero-order) were computed for each and every variable for each of the two separate census years were computed, the results of which are reported in Matrix R reproduced as Table A.3. The r's were based on the total of 206 cases, except those involving the handicapped rate in 1947, where three extreme cases were omitted to minimize the distortion they otherwise would have introduced. As can be seen, many of the variables demonstrated approximately the same intercorrelations in both years. Others showed variations which appear to be caused more by census redefinitions than by secular trends among the variables. To the extent that these gross similarities are found, it appears legitimate to use the data for time comparisons.

Predominantly, in the analysis of the correlation matrices indicated high intercorrelations within certain groups of variables which appeared somewhat independent of one another. On the strength of this observation, I decided to do a factor analysis for the purpose of extracting the underlying factorial structure that could account for the intercorrelations.

The data contained in Table A.3 were used as input for an IBM II Library Program (No. SCSG) for Principal Axes Factor Analysis Using Hotelling’s Iterative Procedure. Seven factors, accounting for more than 95 percent of the total variance in each year, were successively extracted from the original matrices and the reduced residual matrices. Table A.4 presents the sum of the squares and the percentage of variance accounted for in each data year by the four factors retained for later rotation. As can be seen, the solution is quite comparable for both years and in each case the first four factors accounted for better than three-fourths of the total variance. Since subsequent factors added little marginal explanatory power, the study was confined to the first four.

One of the first items of interest in Table A.4 is the degree to which the first factor explains the variance contained in the correlation matrices, amounting to about half in both data years. This dominance of the first factor is not uncommon in principal axes factor solutions, but it should be noted that it appears even more dominant in these results than could be accounted for by the inherent bias of the method. A Thurstone centroid extraction, based upon fifteen variables for 1947 alone, had yielded a similarly dominant first factor, suggesting that, at least for the limited number of variables included in this study and for a city like Cairo, marked by its high cultural variations, the major social differentiations reflected in ecological organization are almost unidimensional. This will be seen more clearly in Table A.5 which presents the factor loadings (before rotation) of each variable on the four basic factors.

As can be seen from Table A.5, the variables with the highest loadings on Factor I included the persons per room ratio (negatively related), the male and female literacy rates (positively associated), the female school enrollment and employment rates (again, positively related), and the handicapped and male unemployment rates (negatively associated with the factor). It had been hypothesized initially that all of these variables would indicate the relative socio-economic status of census tract populations, and in each case the direction of the association was in the hypothesized direction. This led me to identify Factor I tentatively as an underlying vector in...
married loads + 42 in 1947 and 1960 on Factor I) Even the other two "family characteristic" variables, males never married and ever-married women divorced, while apparently related to other factors, still have surprisingly high loadings on Factor I, not all of which could be removed by judicious rotation. Factor II was tentatively identified as reflecting the regions of concentration of single males in the city, for the two variables with the highest factor loadings are the sex ratio in the "migration-prone" years between fifteen and fifty and the percentage of never-married men. No other variables appear consistently and highly related in both study years. The tentative identifications and possible interpretations of Factors III and IV were not readily apparent from the factor pattern before rotation. I shall therefore postpone a discussion of these factors and deal with them after describing the rotational procedures. Here it is sufficient to call the reader's attention to the interesting fact that several variables had "mirror image" loadings on the two factors—close in numerical value but opposite in sign. This phenomenon was used to advantage in the later rotation. Graphs were prepared of paired factor loadings to investigate whether greater analytical strength could be obtained from rotation. It appeared that rotation would improve the factorial solution, but the question was whether to perform an oblique rotation (which might increase the chances for simple structure but at the expense of the independence of the factors) or, in the rotation, to retain the orthogonality of the factors, even if it meant a sacrifice in simple structure. In reaching a decision, I was guided by the ultimate purpose of the method, which was to make it possible to score each census tract in the city on separate factors or dimensions of differentiation. It seemed reasonable, therefore, to retain orthogonality so that the original factors I later wished to plot could be treated independently of one another.

An orthogonal variate analysis rotation was therefore performed, using as input the Factor Matrix (Table A-6) shown above. An IBM Library Program for Variate Matrix Rotation (No. 06.09.94) was employed, which produced factor loadings after rotation as well as the communality values. Table A-6 presents the factor loadings after rotation. As can be seen, rotation succeeded in clarifying the first two factors and, despite the fact that no attempt was made to maximize the congruence of the factor patterns in the two separate data years, the rotations and the resulting factor loadings for 1947 and 1960 are almost identical for the first two factors. In their clarified form, these were identified as a style of life factor and a demographic factor reflecting the prevalence of young single men. The analytical rotation did not produce successful results for Factors III and IV which remained incomparable for the two census years and could still not be logically identified or interpreted. Rather than abandon the two factors, I attempted a graphical rotation to maximize

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Density</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Fertility ratio</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>F. never married</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Males divorced</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Males married</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Males never married</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>F. married</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Males literate</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>F. Sch./Emp.</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Muslims</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

A METHODOLOGICAL NOTE on comparability on at least one factor. The two axes were kept orthogonal to one another and tipped 45°. Transformation matrices were then computed and each set of factor loadings on Factors III and IV was multiplied by the appropriate transformation matrix to yield new factor pattern matrices for Factors III and IV. This process produced a meaningful Factor III which was retained for the analysis. Factor IV was simply eliminated. The results of the graphical rotation and the new factor loadings for 1947 and 1960 on Factor III (revised) are presented in Table A-8.

<table>
<thead>
<tr>
<th>Variables</th>
<th>1947</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>0.44</td>
<td>0.50</td>
</tr>
<tr>
<td>Density</td>
<td>0.48</td>
<td>0.50</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>0.49</td>
<td>0.54</td>
</tr>
<tr>
<td>Fertility ratio</td>
<td>0.47</td>
<td>0.53</td>
</tr>
<tr>
<td>F. married</td>
<td>0.46</td>
<td>0.53</td>
</tr>
<tr>
<td>Males literate</td>
<td>0.49</td>
<td>0.54</td>
</tr>
<tr>
<td>F. Sch./Emp.</td>
<td>0.49</td>
<td>0.53</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>0.48</td>
<td>0.53</td>
</tr>
<tr>
<td>Muslims</td>
<td>0.51</td>
<td>0.57</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality/room</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Density</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Fertility ratio</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>F. married</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Males literate</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>F. Sch./Emp.</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Muslims</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

A TECHNICAL NOTE on comparability on at least one factor. The two axes were kept orthogonal to one another and tipped 45°. Transformation matrices were then computed and each set of factor loadings on Factors III and IV was multiplied by the appropriate transformation matrix to yield new factor pattern matrices for Factors III and IV. This process produced a meaningful Factor III which was retained for the analysis. Factor IV was simply eliminated. The results of the graphical rotation and the new factor loadings for 1947 and 1960 on Factor III (revised) are presented in Table A-8.
TABLE A-10. MEANS AND STANDARD DEVIATIONS OF THE THIRTEEN VARIABLES, CAIRO, 1947 AND 1960

<table>
<thead>
<tr>
<th>Variables</th>
<th>1947 Mean</th>
<th>Standard Deviation</th>
<th>1960 Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/person (ratio)</td>
<td>2.17</td>
<td>0.65</td>
<td>2.43</td>
<td>0.62</td>
</tr>
<tr>
<td>Density (1000 persons/ sq. km)</td>
<td>58</td>
<td>26</td>
<td>74</td>
<td>64</td>
</tr>
<tr>
<td>Sex ratio (males/100 females)</td>
<td>109</td>
<td>173</td>
<td>105</td>
<td>180</td>
</tr>
<tr>
<td>Fertility rate (children under 5/1000 women, 15-49 years of age)</td>
<td>3.24</td>
<td>1.67</td>
<td>2.76</td>
<td>1.60</td>
</tr>
<tr>
<td>Females never married (%)</td>
<td>13.5</td>
<td>7.1</td>
<td>16.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Females divorced (%)</td>
<td>3.8</td>
<td>1.6</td>
<td>3.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Males never married (%)</td>
<td>29.9</td>
<td>8.6</td>
<td>28.8</td>
<td>6.3</td>
</tr>
<tr>
<td>Handicapped/1000 population</td>
<td>8.5</td>
<td>5.9</td>
<td>5.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Males literate</td>
<td>55.5</td>
<td>15.8</td>
<td>61.3</td>
<td>13.7</td>
</tr>
<tr>
<td>Females literate</td>
<td>29.7</td>
<td>17.2</td>
<td>36.3</td>
<td>16.5</td>
</tr>
<tr>
<td>Females in Sch employed (%)</td>
<td>24.9</td>
<td>11.8</td>
<td>7.7</td>
<td>6.5</td>
</tr>
<tr>
<td>Muslim</td>
<td>94.6</td>
<td>14.4</td>
<td>10.9</td>
<td>14.6</td>
</tr>
<tr>
<td>Muslims</td>
<td>85.5</td>
<td>19.9</td>
<td>83.9</td>
<td>13.4</td>
</tr>
</tbody>
</table>

This means (computed by averaging the census tract rates) is not to be confused with the rates for the total city population, since tracts vary in size. No weighing was attempted.

NOTES TO TABLE A-10

1. The persons/person ratio means almost the same phenomenon in both years, and the change in means reflects the real fact that between census dates the population of Cairo grew much faster than the housing stock. For the city as a whole, the housing density (intensity of occupancy) has definitely increased.

2. The increase in average density reflects in part the heightened intensity of occupancy but is also the result of an expansion of the urbanized, built-up portion of the city into the rural fringe. The total density of the city in both years is substantially lower than this figure which averages the densities of census tracts, for the simple reason that the least densely settled tracts on the periphery of the city contain very small populations and very large areas, whereas the reverse is true for census tracts in the central core.

3. The increase in sex ratio reflects a real change in the sociographic structure of Cairo's population. Between 1947 and 1960, there has been an in-migration of the female half of the population (resulting from the war years up to 1947, which has tended to equalize the overall sex ratio in the city for the first time since data became available [early nineteenth century]). The sex ratio still remains slightly unbalanced in the migration-prone phases.

4. This variable changed most between census dates, reflecting a real change in the fertility situation in the city. The increase is due largely to an increase in the maternal mortality rates that occurred in the interim. However, other evidence indicates that the effect of the war on the city's fertility as well, which is in part traceable to an increase in the maternity rates in part to the rural-to-urban migration of families of earlier

migrant males, but may in part really be due to pure fertility factors.

5. This slight change is probably due chiefly to the change in age base of reporting.

6. The decrease in the shift of the handicapped rate means is probably explainable in terms of the shift in census reporting from December 1947 through April 1960. This shift in the concentration of institutionalized persons within a few census tracts seems to have soften somewhat in 1960 where the census recorded institutionalized persons by place of usual residence.

7. Tables 9 and 10. The population of Cairo has indeed become more literate between 1947 and 1960. The general trend is that of the improved means for both sexes for both years in the latter. However, it will be recalled that the age base for the reporting of literate persons was raised from five to fifteen years of age between 1947 and 1960. The effect of this redaction of the age base would be to underestimate literacy in 1960. Therefore, the increase in literacy in Cairo was even greater than is evident from a comparison of census tract rates.

8. No congruence between these two means should be expected since the variable is different in the two census years.

9. As can be seen, a rather marked difference in the means is evident. This does not reflect an excessive redaction in unemployment in Cairo between 1947 and 1960. Rather, it is merely an additional proof that the census definitions of the category "without work" has been drastically altered between censuses. This gross change, had it been noted earlier in the research process, would have been simple reason to eliminate this variable entirely. As it was, the weakness of the variable was not fully recognized until almost the entire project had been executed.

10. Table 12. The change in mean percentage of Muslims reflects a real change in the religious composition of Cairo's population, which is the essence of the conversion of the old Jewish community from the three census tracts that for hundreds of years had constituted the Jewish ghetto of Cairo. The Nationalisation and Secession Laws passed shortly thereafter, confounding the property of enemy aliens (French and British citizens but extending later to Swiss, Belgians, and other European nationals) as well (see Table 17) to conciliating the exodus of other foreign groups. It has also limiting the employment of noncitizens in industrial and commercial es- tablishments to a slower but steady exodus of Greeks and Italians. The net result has been a reduction in the size of the foreigner group. Further, the census data show that, for example, the employment of noncitizens in industrial and commercial es- tablishments to a slower but steady exodus of Greeks and Italians. The net result has been a reduction in the size of the foreigner group. Further, the census data show that, for example, the employment of noncitizens in industrial and commercial es- tablishments to a slower but steady exodus of Greeks and Italians. The net result has been a reduction in the size of the foreigner group. Further, the census data show that, for example, the employment of noncitizens in industrial and commercial es- tablishments to a slower but steady exodus of Greeks and Italians. The net result has been a reduction in the size of the foreigner group. Further, the census data show that, for example, the employment of noncitizens in industrial and commercial es- tablishments to a slower but steady exodus of Greeks and Italians. The net result has been a reduction in the size of the foreigner group. Further, the census data show that, for example, the employment of noncitizens in industrial and commercial es- tablishments to a slower but steady exodus of Greeks and Italians. The net result has been a reduction in the size of the foreigner group. Further, the census data show that, for example, the employment of noncitizens in industrial and commercial es- tablishments to a slower but steady exodus of Greeks and Italians. The net result has been a reduction in the size of the foreigner group. Further, the census data show that, for example, the employment of noncitizens in industrial and commercial es- toolbar and buttons: the number of conifers in the original matrix. Then each matrix is transformed to its log likelihood value and the correlation matr...
APPENDIX

In addition to Factor I, however, I prepared similar maps for the distribution of Factor II and III (revised) scores, although these maps do not appear in this book. They were more simply constructed and of a more tentative nature, since I felt that their validity had been less well established and that it would be going beyond their limitations to use them in more than very rough fashion. Primitive "social areas" were delineated by overlaying the few rough subcities derived from Factors II and III (revised) upon those established from the Factor I scores, but it was decided that, for purposes of the present book, they offered little additional value.
GENERAL WORKS RELEVANT TO EGYPTIAN HISTORY AND DEVELOPMENT


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